Myanmar Consortium for Community Resilience (MCCR)

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MCCR DIPECHO IX

Baseline KAP Survey

FINAL REPORT

Mrs. Bernie O'Neill
Consultant

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List of abbreviations

ACF	Action Contre la Faim
AP	Action Plan
ASA	Action for Social Aid
CBDRR	Community Based Disaster Risk Reduction
CSO	Civil Society Organization
DM	Disaster Management
DR	Disaster Risk
DRR	Disaster Risk Reduction
EWS	Early Warning System
GP	General Population
HH	Household
HVCA	Hazard, Vulnerability & Capacity Assessment
KAP	Knowledge, Attitude and Practice
LNGO	Local Non-Government Organization
MCCR	Myanmar Consortium for Community Resilience
SPPRG	Social Protection Policy & Research Group
SPSS	Statistical Package for Social Sciences
TF	Task Force
TOR	Terms of Reference
VDMC	Village Disaster Management Committee
VOL	Volunteers
YWCA	Young Women's Christian Associations

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Executive Summary

Introduction

The Myanmar Consortium for Community Resilience (MCCR)is an implementing partner in DIPECHO IX Action Plan for South East Asia, and has as its principle objective: "To increase the resilience of coastal communities and urban communities by institutionalizing an inclusive DRR Approach". The Consortium is made up of six partner agencies, including 5 INGOs (ACF, Oxfam, Plan, HelpAge, and ActionAid) and one UN Agency (UN Habitat), as well as three local NGOs (YWCA, ASA and SPPRG).

The project, titled "Safer Coastal and Urban Communities through Inclusive Disaster Risk Reduction in Myanmar" started in May 2014 for a period of 15 months [perhaps to be extended to 18 months if additional funds are made available] and is funded by the European Commission (ECHO). ActionAid is the lead agency and hosts the Secretariat over the full 18-month project period. ActionAid, ACF and HelpAge International, who all have a long term-presence in Myanmar and well established relationships with the local governments, communities and civil society groups, are the implementing agencies. Oxfam, Plan and HelpAge International provide technical support based on their expertise in gender, child-centred DRR, working with older people and UN-Habitat on earthquake risk assessment, strengthening institutional mechanisms for DRR and capacity building on building disaster resilient shelters.

The specific objective is for "Targeted institutions and vulnerable coastal communities in coastal and urban areas have increased capacity to prepare for a range of hazards and manage disaster risk".

One of the project indicators is that "the percentage of target communities that demonstrate knowledge of DRR concepts and preparedness measures by the end of the project has increased from 7% to 40%". This baseline KAP survey was commissioned to measure the current knowledge, attitudes and practices in order to be able to compare this current level with the results of a final KAP survey to be conducted at the end of the project in order to be able to report on this indicator.

The data collection for this survey was carried out in November 2014. Although the project already started in May 2014, many of the capacity building activities that could affect the baseline knowledge, attitudes and practices had not yet been carried out at field level so the data was considered to be at a level with the starting point of the project.

The survey was targeted at two distinct groups – the general population of the target villages that would benefit from the project and the volunteers who would be trained to lead and support disaster management in these communities (VDMCs, task forces and school DRR committees).

Findings

The findings are summarized here for the two respondent groups – volunteers and general population. The findings from the volunteer survey are presented first.

VOLUNTEERS

Volunteers – Demographics

A total of 147 volunteers were interviewed, with female respondents slightly lower than males (46% to 54%), mainly due to high percentage of male respondents from Sittwe township (83%). Most volunteers have received some form of education, with the percentage of those with education level higher than primary/monastic level greater among female volunteers. Only a few volunteers consider themselves to have a disability – 6 out of the 147 interviewed. While the average percentage of volunteers who have attended DRR training is 50%, the percentage is naturally higher among the exist/consolidation villages but still about 25% of the volunteers in these villages have not yet attended DRR training.

Volunteers – Disaster Risk, CBDRR and Climate Change awareness

Over 70% of volunteers say they understand the term "Disaster Risk". But when asked the meaning of disaster risk, the majority gave responses closer to the definition of a disaster rather than "disaster risk". Regarding the elements to be addressed, only 8 volunteers could name all three elements (hazard probability, vulnerability, capacity). However, when specifically asked about each of these three elements, there were very high accurate responses to what should be done (e.g. reduce vulnerability; enhance capacity). Regarding CBDRR, 50% of volunteers said they understood the term. The meaning they gave showed that indeed they did understand something about CBDRR process, although they did not describe in standard terminology. But when asked to identify the four phases, less than 50% could identify each phase. Although over 70% said they knew something that could be done in each of the four phases, examples given showed some overlap or confusion between prevention and preparedness but generally good examples for response and rehabilitation/reconstruction. About 75% of volunteers said they understood the term "Climate Change". Examples given by the volunteers shows that they do indeed know some things about the causes and consequences of climate change. For all three issues explored in this chapter, knowledge among male volunteers was slightly higher than females; older volunteers had higher knowledge than the younger ones; and volunteers with higher levels of education had higher knowledge than those educated to primary/monastic level.

Volunteers – Hazard Awareness and Preparedness

All volunteers were aware of hazards and mentioned tsunamis and cyclones/storms as the ones that have occurred in their communities in the last 10 years. But the one hazard that has had the greatest impact has been cyclones/strong storms. A number of volunteers did not know the cause of these cyclones/storms. Among those who could identify the causes, climate change was given as the reason by the highest number of volunteers (and by more female than male volunteers). The main source of information about cyclones/storms for these volunteers was via the radio or TV. The type of information received was mainly about the impact of the hazard, with less volunteers receiving information about where, when or what to do. Regarding preparedness, the majority could only suggest less than three measures to take.

Volunteers – Vulnerability, Capacity and Inclusiveness

A very high percentage of all volunteers (between 70-90%) identified older persons, children and persons with disabilities as those most affected by cyclones/strong storms. However women were mentioned by only about 50% of volunteers. Very few mentioned poor households or families in remote areas. The main reason why volunteers felt these groups were most affected related to issues of evacuation (older people and disabled cannot move easily on their own; children need assistance; and women are busy with children with gives them additional burden). The main suggestion from most volunteers to reduce this impact was for family and neighbors to help. Most of the volunteers said their suggestions are already in their DRR Action Plans especially in the exit and consolidation villages. How these groups can be included in community disaster management evoked slightly different responses in relation to each of the groups but in general between 50-60% of volunteers believed they could have a role to play as members of committees/task forces or as advisors. The percentage of volunteers who said it would be difficult to include was 16% in respect of older persons, 19% for children, 18% for women, and a high of 27% in relation to persons with disabilities. Regarding added value of these groups on disaster management committees, a high percentage of volunteers could name some key areas of added value. However, in spite of the added value noted by a high percentage of volunteers, still some of them either don't know what the added value could be or think there is no added value of including these groups on disaster management committees. In particular, 20% of respondents did not know what added value persons with disabilities could bring and another 14% did not see any added value. For children, 10% either did not know or did not see any added value.

Volunteers – Risk Assessment, Planning & Sustainability

Although the majority of volunteers (74%) could not explain the meaning of the risk assessment process, and the meanings that were given by the others were either not accurate or comprehensive, 75% of the volunteers said they would be confident to conduct risk assessment processes in their communities. Almost 80% of volunteers said they were confident to conduct DRR training to villagers, although with a slightly lower confidence level among female volunteers. Confidence to include vulnerable groups in DRR planning was generally quite high (approximately 80% overall). But a higher percentage of volunteers (17%) were less confident with the inclusion of persons with

disabilities. Inclusion of children had the highest confidence levels. 61% of volunteers reported that their village had a DRR Action Plan. Among these, almost 80% reported that at least some parts of the plan had been implemented. Many different activities were done but the highest responses related to small-scale structural mitigation works. For activities not implemented, 40% did not know what had not been done. Of those who did know, the majority mentioned structural works as not having been implemented. Regarding why these activities were not implemented, 42% did not know. Among the others the responses were a mixture of lack of resources and problems with community organizing. The majority of volunteers could name at least some things they should during a disaster but 12% overall did not know what they should do. Generally the responses for what they should do during a disaster were accurate but a little confusion among some volunteers who mentioned warnings – which should be an activity before, rather than during a disaster.

Volunteers – Institutional Arrangements

Only 22 volunteers (15%) say they know the DM structure of Myanmar but none of the could name the five levels. A higher number (45 volunteers; 31%) have heard of the DM Law. 63% of volunteers say their village tract or township has DM committee. 73% of these (the 63%) have shared their village DRR Action Plans with these committees. Relationships are generally said to be good between village DRR committees and their village tracts/townships. Less than 50% of volunteers knew that their village tract or township had a development plan. Of those that knew, a high percentage (80%) of volunteers said that those plans included activities from the village DRR plans.

Volunteers – Schools

Of the 147 volunteers surveyed, only 84 answered questions on schools, these being the volunteers from 12 of the 19 villages surveyed. About 50% of the volunteers said their school had a DRR committee, the highest percentage of responses coming from Pyapon. About half of these volunteers said that cooperation was good with these committees, with the highest percentage of positive responses coming from volunteers in the exit and consolidation villages. About one third of the volunteers felt that students know what to do during and after a disaster, the highest percentages being from Labutta. About 50% of the volunteers said their schools had an evacuation plan but only 16% said schools had conducted simulations or drills. Approximately 30% said the villages had a backup plan to avoid disruption to school operations in the event of a disaster occurring during the school calendar. Regarding the attitudes of volunteers towards student capacity, 86% said felt that girls could be rescue workers and almost 90% felt that students could make a contribution toward disaster management and planning in their schools. But a high percentage of volunteers in Sittwe (33%) did not feel girls could be rescue workers and 20% of volunteers in Pathein did not feel students could make a contribution to disaster management and planning.

GENERAL POPULATION

General Population – Demographics

Of the 611 respondents interviewed, 52% were female; 64% were Buddhist, 23% Muslim (mainly from Sittwe) and 12% Christian. Eight percent of the respondents considered themselves to have a disability (mainly mobility) and 8% also mentioned that they have HH members who have disability (also mainly mobility). The majority of respondents have been educated, mostly either primary, monastic or middle school. Of the 16% of respondents who have not received any education, the majority of these were female (22% of females compared to 9% of males). The households of the respondents were headed by females in 14% of the cases. Two thirds (66%) of households engage in farming or fishing. The others are either self employed (14%) or employed by others (either daily laborers, in the private sector or as government staff).

General Population – Hazard Awareness and Preparation

Most respondents could name a number of hazards that have occurred in the last ten years; only 6% did not know. Similar to the volunteers above, the main hazard ranked by the majority of respondents was cyclones/strong storms. The second one (but considerably less in number of respondents than cyclones) was flood, with the majority of responses ranking this one coming from Pyapon. Fire was the hazard with the third highest impact but these responses came almost exclusively from one township, Sittwe. Knowledge about why these hazards occurred revealed that almost a quarter of the respondents did not know why they hazards occurred. Among those who did give reasons, the responses were about evenly divided between natural causes and climate change for cyclones and floods. But a high percentage of Muslim respondents noted “divine intervention” as a cause of

cyclones/storms. Fires were seen to be caused by humans. Radio and TV were the main sources of information about cyclones/storms and floods. The type of information received was mainly about the impact of hazards (about 50%). There was relatively less information received by respondents about how to prepare for these hazards – 20% for cyclones/storms, 17% for floods and only 2% for fires. Quite a high number of respondents could not give any information about how to prepare for the two main hazards – 14% of respondents in both cases. The responses given by those who did know were quite low, with most respondents only noting two or three things. The preparedness measure that received the highest response to both these hazards was "stockpiling food and water". Overall, the above responses show a relatively low level of knowledge about possible measures that can be taken at HH or village level to prepare themselves for these hazards.

General Population – Vulnerability

For the three main hazards analyzed the groups identified by respondents as most affected in all cases were older persons, children and persons with disabilities. Relatively few respondents mentioned women or poor households. The main reason given in most cases was difficulty with evacuation, with only a few respondents raising other issues such as difficulty in receiving early warnings. Considering problems with evacuation were the main cause noted by the respondents, their suggestions for reducing impact also related to this issue and their main suggestion was that family and neighbors should help these vulnerable groups during evacuation. Only about 50% of respondents felt that these vulnerable groups could be included in DRR management. The others either felt that it would be difficult to include or they had no idea how to include.

General Population – Early Warning & Planning

Early warning systems were said to be in place in the communities of about 50% of respondents. But the responses were between 80-90% for exit and consolidation villages and almost non-existent in new villages. The EWSs were mostly for cyclones/storms and floods, very little for other hazards. The most common means reported for giving warnings was by alarm (loudspeaker, siren, etc.), followed by flags/signboards. The warnings were most often given by the village authorities but in the exit and consolidation villages, more respondents mentioned the VDMCs and Task Force members as the ones to give the warning. Less than 30% of respondents said their community had conducted a simulation or drill for any hazard. The simulations/drills that were done were almost exclusively for cyclones/storms. Of the respondents who had participated, over 90% said they were useful to them. Only 19% of respondents said that their communities had a DM plan. But the percentage was approximately 50% in the exit and consolidation villages. About 90% of the respondents who had participated in the planning process said the plan was helpful to their household or community. The main contents of the plan as reported by the respondents who participated were preparedness measures, early warning and vulnerability/hazard assessments. Only 42% overall said there was adequate participation in the planning process.

General Population – Preparedness and Response

Actions that respondents' households have actually taken to date to prepare for an emergency situation have been quite limited, with 36% of respondents saying nothing. This figure was very high for the exit area of Labutta, at 67%. Generally those who have taken some measures have only done one or two things, the most frequently mentioned being stockpiling food and water (33% of respondents). In response to what they would do if they received a warning that about an impending hazard the majority of respondents said they would help with evacuation. The next two things mentioned most frequently were stockpiling food and protecting important documents. Cross checking those respondents who mentioned stockpiling as a preparedness measure and those who gave it as an immediate response to receiving a warning about an impending hazard shows that over 50% of respondents mentioned it both times. For protecting important documents, the overlap was over 40%. So for stockpiling food/water, the remaining 50% (and 60% for protecting documents) do not consider that they should prepare these things in advance, they wait until a warning is given.

General Population – Institutional Arrangements

Responses of volunteers in the exit and consolidation villages identified VDMCs and various task forces but these were mentioned less in the newer villages. There are also more health volunteers in the exit and consolidation villages than the new ones, with the exception of villages in Pathein where the percentage of respondents who said their community had health volunteers was low (only 26%). School DRR committees are also present in more communities of the exit and consolidation villages than the new ones, with again a lower percentage reported from Pathein. Although some examples of

usefulness were given, it was not always clear which of the groups or individuals was most useful to the respondents.

General Population – Psychosocial Impact

Not very many respondents say they have noticed any post-disaster psychosocial impact. Those who have say it most affects women and children. It shows up through changes in their behavior, getting sad, angry or afraid or having problems concentrating. There were not many suggestions from respondents as to how the community could help, other than a few people saying to encourage these affected persons.

Conclusions

A general trend running through the findings is that communities in exit and consolidation areas where one or two DRR projects have already been implemented show higher knowledge in most areas then the new communities. Actually many of these communities, particularly at the consolidation phase, have only been assisted by one project to date. This shows that an increase in knowledge, attitude and practice can be achieved in a short time. But the gaps in knowledge and practice still existing in the exit villages shows the need for reinforcing what has been introduced. From the experience of this consultant, a community needs three consecutive capacity building interventions (without gaps in between) in order to institutionalize the key messages related to community resilience.

The findings are also clear that among volunteers, knowledge among the female volunteers was lower than their male counterparts. A similar situation existed among the younger volunteers; their knowledge was generally lower than the older volunteers. The project needs to pay particular attention to these segments of the village volunteers.

The indicator for measuring increased capacity is very general in the project logframe. As it is not practical to list too many indicators (and a number of the areas covered by this survey already showed high baseline figures, particularly related to attitudes), the consultant has selected a list of 23 proposed indicators for the project to focus on. These are summarized below (for full details, refer to Section V of the main report, which also sets separate targets where appropriate for the different intervention levels).

SN	Suggested indicator	Current level	Proposed target
1	Volunteers can clearly explain the meaning of Disaster Risk	Close to 0%	33%
2	Volunteers are clear about the three elements of Disaster Risk	5%	38%
3	Volunteers can explain the meaning of Risk Assessment	Close to 0%	33%
4	Volunteers can clearly explain the meaning of CBDRR	50%	80%
5	Volunteers know the 4 phases of DM	8%	41%
6	Volunteers can explain the meaning of Climate Change	19%	52%
7	Volunteers can name more than three ways they can prepare for each main hazard	16%	49%
8	Volunteers can explain at least three reasons why vulnerable groups are more affected by disasters	10%	43%
9	Volunteers know the DM structure in Myanmar and can name each of the levels	Close to 0%	33%
10	Volunteers are aware of the DM Law	31%	64%
11	Village DRR plans have been shared with village tract/township DM committees	46%	79%
12	Schools in the communities have DRR committees	24%	57%
13	Students know what to do during and after a disaster	17%	50%
14	Schools have evacuation plan	26%	59%
15	Target groups can name at least three things that can be done to prepare for their main hazards	43%	76%
16	Target groups are aware of how hazards can affect women differently to men	16%	49%
17	Target groups are aware of how hazards can affect `poor people	10%	43%

SN	Suggested indicator	Current level	Proposed target
	differently to those better-off		
18	Volunteers can explain at least three reasons why vulnerable groups are more affected by disasters	10%	43%
19	Community has EWS	51%	80%
20	Community has conducted simulations/drills	29%	62%
21	Community has DM plan	19%	52%
22	Target group feel there was adequate participation in the planning process	42%	75%
23	At least 3 preparedness measures undertaken by households	32%	65%

Final remarks

This baseline survey has collected a lot of data which establishes current knowledge, attitudes and practices among the target population and the volunteers. It is hoped that this information can be used by the MCCR consortium to build on the areas of weaknesses identified to ensure that the target population increase their resilience to reduce impacts from any future hazard that may occur.

The consultant thanks all those who gave up their time to participate in this survey and wishes the project team, volunteers and target communities success in achieving their goal of community resilience.

I. Introduction

The Myanmar Consortium for Community Resilience (MCCR)is an implementing partner in DIPECHO IX Action Plan for South East Asia, and has as its principle objective: "To increase the resilience of coastal communities and urban communities by institutionalizing an inclusive DRR Approach". The Consortium is made up of six partner agencies, including 5 INGOs (ACF, Oxfam, Plan, HelpAge, and ActionAid) and one UN Agency (UN Habitat), as well as three local NGOs (YWCA, ASA and SPPRG).

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The specific objective is for "Targeted institutions and vulnerable coastal communities in coastal and urban areas have increased capacity to prepare for a range of hazards and manage disaster risk". In order to achieve this objective, the consortium will implement activities to deliver the following 3 main results:

Result 1: Urban and coastal communities have increased capacity to prepare for a range of hazards and manage disaster risk using an inclusive approach. Activities include: 1) Community level workshops and training for empowerment, 2) Recruitment and training of women leaders to community level DRR structures, 3) Formation/strengthening and capacity building of inclusive community-based organizations on DRR and CCA, 4) Participatory community risk assessment, 5) Development of Risk Reduction Action Plans, 6) Community awareness-raising on DRR and CCA, including simulation exercises, 7) Implementation of small-scale mitigation works, and 8) Consolidation and exist activities.

For Result 1, there are three objectively verifiable indicators:

1. Percentage of target communities that demonstrate knowledge of DRR concepts and preparedness measures by the end of the project.
2. TF and VDMCs include women leaders
3. DRR action plans are in place in all targeted villages by end of project.

Result 2: Key institutional stakeholders have the capacity to implement standardized and inclusive DRR tools to manage current and future risk. Activities include: 1) Upgrade and dissemination of standard tools and inclusive approaches, 2) Implementation of school-based DRR, 3) Capacity-building of City Development Committees on Earthquake Risk Reduction through risk assessment and resilience planning, 4) Capacity-building of local Governments (village tracts, township, district, region/state) and DRR and CCA and DRR/CCA mainstreaming, and 5) Capacity building of CSOs and LNGOs on DRR and CCA.

For Result 2, there are three objectively verifiable indicators:

1. Targeted institutional stakeholders have DM plans in place and shared with relevant authorities by end of project.
2. By the end of the project, targeted institutional stakeholders have demonstrated their commitment to the inclusive CBDRR approach through implementation of at least one action of their DM plan.
3. Number of capacity-building initiatives delivered by the consortium to targeted institutional stakeholders by the end of the project.

Result 3: The Government takes action to develop an inclusive national CBDRR policy. Activities include: 1) Support to DRR WG for inter-agency coordination and implementation of the Strategic Framework and support to engagement with Union Government for the institutionalization of CBDRR, 2) Advocacy for institutionalization of CBDRR, and 3) Coordination with MRCS.

For Result 3, there are two objectively verifiable indicators:

1. By the end of the project, key government bodies have advanced the CBDRR agenda within their respective departments as a result of at least 3 capacity building and advocacy initiatives supported by the consortium and implemented through DRR WG.
2. By the end of the project, the government has progressed towards the development of a national CBDRR policy by implementing at least one measurable action (eg. A technical support to the DRR WG or the publication of a policy document.

This project commenced in May 2014, but the main capacity building activities have not yet started. So, although it is already a few months into the project, the baseline data is now being collected regarding knowledge, attitude and practice around a number of key DRR issues.

II. Objectives & methodology of the Baseline Survey

Objective

This baseline KAP survey collects information/data on existing knowledge, attitudes and practices in the project's working areas prior to the commencement of field level activities. Specifically, it assesses and documents the current status of people's knowledge, attitudes and practices in relation to hazard awareness, vulnerability, inclusion, disaster planning, disaster preparedness, early warning, disaster response and women's leadership. It provides data against which to assess the project's progress towards meeting the indicators under Result 1 of the project's logical framework. At the same time, it provides some recommendations for ongoing project monitoring and evaluation in relation to these indicators.

The baseline KAP survey also provides a basis for comparison between "new villages" where the DIPECHO project is being implemented for the first time, "consolidation villages" where communities participated in the last DIPECHO project (implemented between June 201-December 2013), and "exit villages" where communities participated in the last two DIPECHO projects (implemented between July 2010-September 2011 and between June 2012–December 2013).

Lastly, the baseline KAP survey provides information that can feed into the ongoing project design by providing a deeper understanding of the factors and dynamics facilitating/inhibiting resilience building in the target communities.

Methodology

The methodology carried out for this baseline survey follows the process requested by MCCR as set out in the TOR for the survey (see Annex 1 attached) and is summarized here under the following headings:

- Sampling design
- Preparation of survey tools
- Training of enumerators
- Pre-testing the tools
- Field data collection
- Data entry and analysis

Full details on the above processes can be found in the following reports submitted to MCCR:

- Progress report on methodology, submitted by external consultant on 3rd October 2014
- Field report submitted by local consultant on 13th December 2014.

Sampling design

In line with KAP surveys conducted under the previous DIPECHO Action Plans, the KAP survey for the Action entitled "Safer Coastal and Urban Communities through Inclusive Disaster Risk Reduction in Myanmar" funded by ECHO under the 9th DIPECHO Action Plan for South East Asia targets two specific groups:

- The general population targeted by the project and
- Volunteers with specific roles to play in DRR at community level (such as VDMCs and Task Force members)

Sample selection for both these groups follows a stratified and randomized approach as set out in the following paragraphs.

The general population

The population for this Action covers 92 villages (or camps) spread over five townships of two regions/states, with an estimated number of over 28,000 HHs. For this population size, using a confidence level of 95% and a confidence interval of +/- 3 (margin of error), a total of approximately 600 HHs should be interviewed through the general population survey – as per the calculation in the box hereunder:

$$n = \frac{z^2 * p * q}{d^2}$$

z = alpha risk expressed in z-score; p = expected prevalence; q = 1-p power; and d = absolute precision (margin of error)

$$\frac{1.96^2 * 0.15 * (1-0.15)}{0.03^2} = 544 \text{ - rounded up to nearest 100 = 600}$$

While it would have been possible to spread this sample of 600 HHs across all villages using PPS (Population Proportion to Size) random sampling, this would be unnecessarily expensive a study to implement due to the wide geographical coverage. Therefore the sample was concentrated on 15% of villages in each township, with the exception of Sittwe which has a higher population per village where 30% of villages were included in the sample. The villages in each township to match this sample were selected randomly. The list of villages selected for this baseline survey is shown in Annex 2 attached.

The sample of HHs required (approximately 600) was not applied proportionally to the size of the 19 villages selected. Such a PPS allocation would be inefficient to apply in the field as some villages would require less interviews than an enumerator could achieve in one day and would thus not allow sufficient coverage of the various types of interviews required. Therefore a minimum total was assigned to each village – 8 purposive interviews (2 FHH, 2 children, 2 persons with disability and 2 older persons) and seven general interviews (roughly 50/50 men and women as two women were already interviewed as head of FHHs). This minimum number was applied to all villages less than 200 HHs. An incremental increase of 7 general HHs per 100 HHs was added to larger villages.

The distribution of the sample using these proportions resulted in a slightly larger sample than the 600 required – a total of 612 general population interviews. The distribution of this sample per village, purposive and general is shown in Annex 2 attached.

Volunteers (VDMCs/Task Force Members)

In order to reduce survey costs and ease the work of enumerators, the survey of volunteers was conducted in the same 19 villages selected for the general population survey. As the numbers of VDMC and task force members averages between 30-35 persons per village, it was agreed to conduct a minimum of 12 interviews per village spread among VDMCs, Early Warning Task Forces, Search & Rescue Task Forces and First Aid Task Forces. In addition, there are School DRR committees formed in some of the 19 villages, so where school DRR is planned, it was planned to interview three members from the School Committee.

However, some of the newer villages included in the sample do not yet have DRR committees formed. So out of the 19 villages selected, volunteer surveys were conducted in only 10 of these. But of the

remaining 9 villages, 7 of these have School DRR committees. The total number of Volunteer interviews planned was 150, as shown in Annex 2 attached.

Preparation of survey tools

After review of draft tools used for previous KAP surveys by the consultant, a meeting was held between with all consortium partners on the 27th October to finalize the tools to be used during this KAP survey. A number of changes were proposed to the questionnaires used for the endline KAP survey for the DIPECHO VIII Action Plan. The main reasons for change were to incorporation new issues to be addressed during this current Action Plan as well as to reformulate some questions to collect more qualitative responses.

The questionnaires were thus revised in English by the consultant and circulated to consortium members for additional comments. Once these comments were incorporated, the questionnaires were translated into Myanmar language by the local consultant recruited by AAM (Ms. Saw Thu Nander).

The revised questionnaires in English are attached as Annex 4 (for General Population) and Annex 5 (Volunteers). The Myanmar language versions of these were then used for the training of enumerators described in the next section below.

Training of enumerators

The training of enumerators took place from 29th to 31st October at the AAM-Global Platform office as per the agenda shown in Table 3 below. This training was organized for only Ayerawaddy region as logistical constraints meant that a separate training was to be organized for the KAP survey enumerators from Rakhine state. The Rakhine team were trained by the local consultant after the pre-testing of the tools. A total of 17 enumerators attended the Ayerawaddy training from the different project areas of the MCCR implementing partners and 15 enumerators from Rakhine state were trained by the local consultant. All enumerators were confident with the tools at the end of the trainings. A manual entitled “MCCR DIPECHO IX Baseline KAP Survey – Enumerator Guidelines” was produced covering general survey protocol, HH sampling process as well as specific instructions on the execution of the survey tools. This manual was translated into Myanmar language by the local consultant as a reference guide for the enumerators (and their supervisors) during the survey. This English version of the manual is attached as Annex 6.

Pre-testing the tools

Two target villages from Pyapon township were selected for the pre-testing - Phoe Sue Chaung and Kun Di Gyi. The pre-testing was conducted over two and a half days (between 31st October and 2nd November). There were no major issues raised but there was some discussion about what age groups could be interviewed. For the general adult population, it was suggested that the age group should be 18 to 60 years old. However, the consultant recommended not putting an upper limit on this age group as many people over the age of 60 are quite capable (sound mind and hearing) to act as respondent for their household. The other age group discussed was children. Some enumerators felt that children over the age of 10 could be interviewed – whereas the instructions on the sampling said 15 to 18 years. The consultant suggested to focus on the 15 to 18 years age group as the survey is only targeting 2 children per village so it should not be a problem identifying two in this age category and they would be of an age most likely to contribute relevant information. Regarding the questions in the survey tools, there were only a few minor changes to translations of terms in Myanmar language. The duration of the interviews varied considerably between the enumerators ranging from less than 30 minutes to slightly over one hour. The difference in time related to the extent of responses received. While the volunteer questionnaire is a bit longer than the general population one, enumerators found that it could often be done quicker as the respondents were familiar with the subject and could answer quickly.

Field data collection

The collection of data in all sampled villages was conducted in November, firstly in Ayerawaddy Region and then in Sittwe, Rakhine State. The survey almost managed to cover the proposed sample numbers with 611 respondents to the General Population survey completed out of the planned 612.

For the Volunteer survey, 147 questionnaires were completed out of the planned 150. The total of completed questionnaires is still within the required sampling framework described above. There were no major obstacles encountered during the field work, only the following two issues were noted:

- The majority of villages were only accessible by waterways. Therefore the teams spent a lot of time on boats.
- Especially in the urban areas of Sittwe township it was noted that NGOs are not particularly welcome.

The field report of the local consultant is attached as Annex 3 and includes some initial impressions of the field teams regarding disaster preparedness, knowledge, attitudes and practices in the townships visited during the survey.

Data entry and analysis

After the data collection was completed, the data analyst conducted training for four persons from partner organization on the data entry process in SPSS as well as the coding of qualitative questions. Following the training, the data was entered in SPSS. The data analyst conducted quality control spot checks, cleaned the data, ran automated tests to check the data quality and produced frequency tables. The data was then sent to the lead consultant (author of this report) for additional checking. After the dataset was thoroughly cleaned, the lead consultant ran additional cross checks where relevant (e.g. on age and education levels of volunteer respondents) before interpreting and presenting the findings in this report.

III Findings – Volunteers

This section discusses the results obtained from the analysis of the data from the Volunteers Survey (the data from General Population is presented in the next section) under the following headings:

1. Demographics
2. Disaster Risk, CBDRR and Climate Change awareness
3. Hazard awareness and preparedness
4. Vulnerability, capacity and inclusiveness
5. Risk assessment, planning & sustainability
6. Institutional arrangements
7. Schools

III.1 Demographics

A total of 147 volunteers were interviewed during this survey. Although it was planned (as per the sampling design described in the previous chapter) to survey 50% male/female, the actual percentage of males was slightly higher due to difficulty in identifying female respondents, especially in Sittwe. The numbers of respondents per township are shown in Table III.1.1 below by gender. The table also identifies the intervention status of the areas as this is an important criterion for comparing issues of knowledge, attitude and practice in later questions below.

TABLE III.1.1 – Gender of respondents & intervention status (# & %)

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By intervention			
Intervention level	Exit	Consol	Consol	New	New	New		Exit	Consol	New	Total
Male	23	12	14	19	6	5	79	23	26	30	79
Female	18	12	13	18	6	1	68	18	25	25	68
	41	**24**	**27**	**37**	**12**	**6**	**147**	**41**	**51**	**55**	**147**

As % of respondents

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By intervention			
Intervention level	Exit	Consol	Consol	New	New	New		Exit	Consol	New	Total
Male	56%	50%	52%	51%	50%	83%	54%	56%	51%	55%	54%
Female	44%	50%	48%	49%	50%	17%	46%	44%	49%	45%	46%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

As per the sampling design, these 147 volunteers serve their communities in various capacities, with many of them holding more than one area of responsibility. Therefore the totals in Table III.1.2 below are greater than the total number of volunteers interviewed – in this table, and all other tables were multiple responses mean the totals are greater than the sum of respondents, the total row will be titled "multiple".

TABLE III.1.2 – Type of volunteers by township, gender and religion (# & %)

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By gender		By religion		
Intervention level	Exit	Consol	Consol	New	New	New		Male	Female	Buddhist	Muslim	Christian
EW task force	8	7	7	8			30	18	12	21		9
Search & rescue TF	13	6	6	10			35	19	16	19	1	15
First Aid TF	12	8	7	9		1	37	14	23	25	1	11
VDMC	11	7	7	9		1	35	21	14	26		9
School DRR committee	6		1	3	12	5	27	16	11	22	2	3
Multiple responses	**50**	**28**	**28**	**39**	**12**	**7**	**164**	**88**	**76**	**113**	**4**	**47**
% of all responses										**69%**	**2%**	**29%**

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By gender		By religion		
Intervention level	Exit	Consol	Consol	New	New	New		Male	Female	Buddhist	Muslim	Christian
EW task force	16%	25%	25%	21%			18%	20%	16%	19%		19%
Search & rescue TF	26%	21%	21%	26%			21%	22%	21%	17%	25%	32%
First Aid TF	24%	29%	25%	23%		14%	23%	16%	30%	22%	25%	23%
VDMC	22%	25%	25%	23%		14%	21%	24%	18%	23%		19%
School DRR committee	12%		4%	8%	100%	71%	16%	18%	14%	19%	50%	6%
Multiple responses	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

As can be seen from the above table, there was a relatively even spread of respondents across the main functions (VDMC/Task Force members) but some imbalance when compared between townships. For some of the new areas (especially NgaPuDaw and Sittwe), many committees and/or task forces had not yet been established and some villages sampled did not yet have a school DRR committee. As would be expected given the country demographics, the majority of volunteers were Buddhist, with Christians the second biggest group. There were only four Muslim volunteers interviewed which means that analysis of any further responses by religion must keep in mind that such a low number cannot be considered a reliable representation of Muslim attitudes or practice.

The highest level of education attained by these volunteers ranged from two persons who had not attended any school to 20 persons who had attended college or university (Table III.1.3). The highest percentages of volunteers were those with primary or middle schooling.

TABLE III.1.3 – Education level of volunteers by township, gender and religion (# & %)

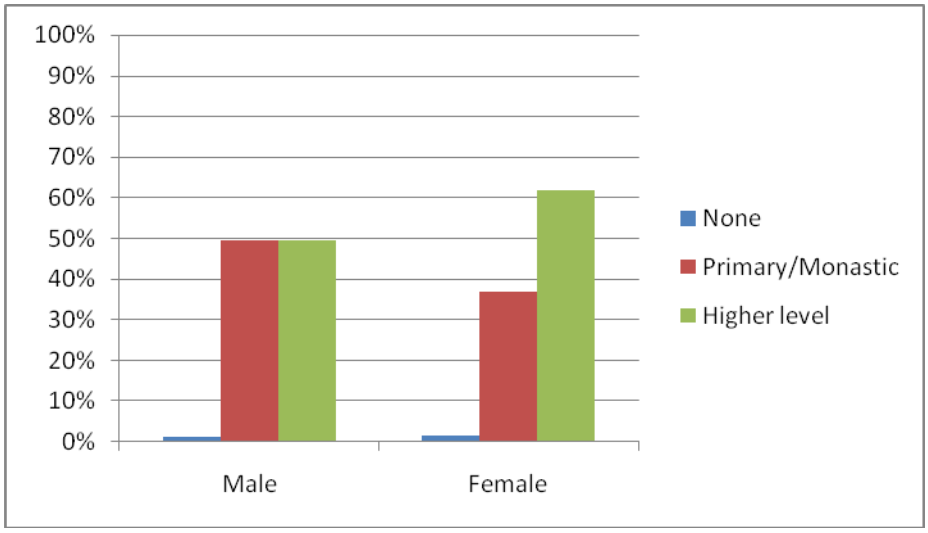
Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By gender		By religion		
Intervention level	Exit	Consol	Consol	New	New	New		Male	Female	Buddhist	Muslim	Christian
None	1			1			2	1	1	1		1
Primary	12	9	14	13			48	25	23	33	1	14
Monastic	2		7	7			16	14	2	16		
Middle	16	8	4	12	1	1	42	19	23	26		16
High	6	6	2	2	1	2	19	11	8	9	2	8
Coll/Univ	4	1		2	10	3	20	9	11	17	1	2
	41	**24**	**27**	**37**	**12**	**6**	**147**	**79**	**68**	**102**	**4**	**41**

Highest level of education %'s

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By gender		By religion		
Intervention level	Exit	Consol	Consol	New	New	New		Male	Female	Buddhist	Muslim	Christian
None	2%			3%			1%	1%	1%	1%		2%
Primary	29%	38%	52%	35%			33%	32%	34%	32%	25%	34%
Monastic	5%		26%	19%			11%	18%	3%	16%		
Middle	39%	33%	15%	32%	8%	17%	29%	24%	34%	25%		39%
High	15%	25%	7%	5%	8%	33%	13%	14%	12%	9%	50%	20%
Coll/Univ	10%	4%		5%	83%	50%	14%	11%	16%	17%	25%	5%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Extracting data from table above regarding levels of education by gender shows that a higher percentage of female volunteers have education levels higher than primary school compared to male volunteers (Chart III.1.1). While the table above shows that 75% of Muslim volunteers have attended high school or college/university compared to only about a quarter of Buddhist or Christians, as noted earlier the low numbers of Muslim volunteers included in the sample don't allow for generalization.

CHART III.1.1 – Education levels of volunteers by gender (%s)



Analysis of the age of the volunteer respondents shows that the majority fall between the ages of 19 to 50 years old (Table III.1.4)

TABLE III.1.4 – Age of volunteers by township (# & %)

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	% of
Intervention level	Exit	Consol	Consol	New	New	New		total
18 years of less	1		7	10			18	12%
19 - 30 years	10	4	5	9	1		29	20%
31 - 40 years	8	4	4	2	2	1	21	14%
41 - 50 years	11	7	6	8	5	2	39	27%
51 - 59 years	7	7	1	4	4	3	26	18%
60 - 70 years	4	1	4	3			12	8%
Over 70 years		1		1			2	1%
	41	**24**	**27**	**37**	**12**	**6**	**147**	**100%**

Many different occupations support the livelihoods of these volunteers as shown in Table III.1.5 below. A higher percentage of female volunteers run their own business or are employed by government while the highest percentage of male volunteers are engaged in agriculture or fishing.

TABLE III.1.5 – Main occupations of volunteers by township & gender (# & %)

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By gender	
Intervention level	Exit	Consol	Consol	New	New	New		Male	Female
Housewife	4	1	2	2			9		9
Student	1		2	3			6	2	4
Agriculture/crops	6	13	1	14	1		35	24	11
Livestock	1		1	3		1	6	5	1
Fishing	7		7	4		1	19	15	4
Self-employed/own business	11	8	3	4	3		29	12	17
Daily wage laborer	4		6	4			14	9	5
Employed by government	6			1	8	2	17	4	13
Not working	1	2	5	2		2	12	8	4
	41	**24**	**27**	**37**	**12**	**6**	**147**	**79**	**68**

As a percentage of totals

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By gender	
Intervention level	Exit	Consol	Consol	New	New	New		Male	Female
Housewife	10%	4%	7%	5%			6%		13%
Student	2%		7%	8%			4%	3%	6%
Agriculture/crops	15%	54%	4%	38%	8%		24%	30%	16%
Livestock	2%		4%	8%		17%	4%	6%	1%
Fishing	17%		26%	11%		17%	13%	19%	6%
Self-employed/own business	27%	33%	11%	11%	25%		20%	15%	25%
Daily wage laborer	10%		22%	11%			10%	11%	7%
Employed by government	15%			3%	67%	33%	12%	5%	19%
Not working	2%	8%	19%	5%		33%	8%	10%	6%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Only six of the 147 volunteers interviewed considered themselves to have a disability. All of these were males and the majority of them were in Labutta township (Table III.1.6).

TABLE III.1.6 – Number of volunteers who consider they have a disability

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By gender	
Intervention level	Exit	Consol	Consol	New	New	New		Male	Female
Yes	5		1				6	6	
No	35	24	26	37	12	5	139	72	67
Don't know	1					1	2	1	1
	41	**24**	**27**	**37**	**12**	**6**	**147**	**79**	**68**

Disabilities mentioned were mobility (3 persons) and hearing (2 persons). The sixth person did not give a response.

Over 50% of the volunteers interviewed had attended some DRR training with the respective MCCR partners (Table III.1.7). While understandably the percentage was much higher in the exit and consolidation villages, it was surprising that almost 25% of volunteers in these areas say they did not attend any such training (Chart III.1.2).

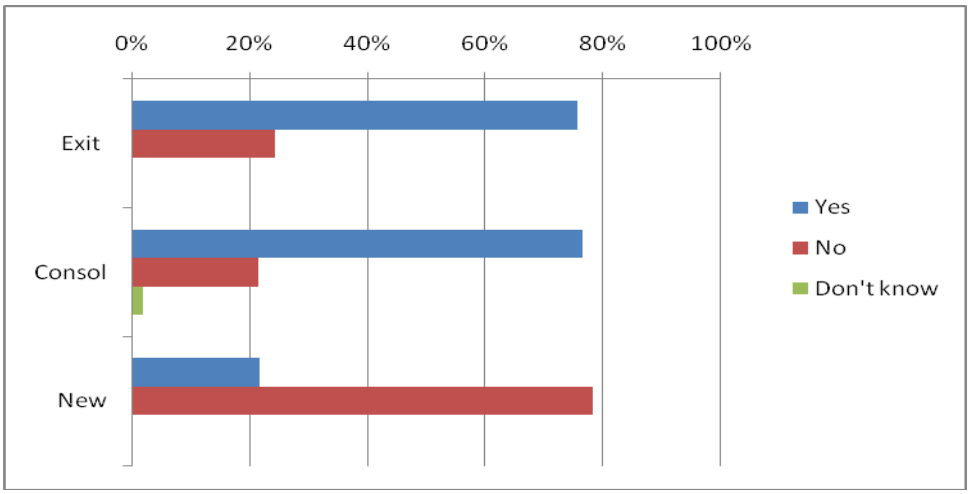
TABLE III.1.7 – Volunteers who attended DRR training by township (# & %)

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By intervention			
Intervention level	Exit	Consol	Consol	New	New	New		Exit	Consol	New	Total
Yes	31	23	16	10	1	1	82	31	39	12	82
No	10	1	10	27	11	5	64	10	11	43	64
Don't know			1				1		1		1
	41	**24**	**27**	**37**	**12**	**6**	**147**	**41**	**51**	**55**	**147**

Attended DRR training %'s

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By intervention			
Intervention level	Exit	Consol	Consol	New	New	New		Exit	Consol	New	Total
Yes	76%	96%	59%	27%	8%	17%	56%	76%	76%	22%	56%
No	24%	4%	37%	73%	92%	83%	44%	24%	22%	78%	44%
Don't know			4%				1%		2%		1%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

CHART III.1.2 – Volunteers who attended DRR training by intervention status (%s)



A slightly higher percentage of the male volunteers had attended DRR training compared to the females (Table III.1.8). Comparing attendance by age groups shows that while over 75% of older volunteers (over 60 years old) have attended training, almost a similar percentage of the youngest group (under 18 years old) have not attended training. Within the other age groups, the percentages are roughly 60-40 in favor of those who have attended.

TABLE III.1.8 – Volunteers who attended DRR training by gender, age & education

	By gender		By age					By education level		
# volunteers	Male	Female	Up to 18	19-30	31-45	46-60	Over 60	None	Prim/Mon	Higher level
Yes	48	34	5	18	26	23	10	1	41	40
No	30	34	13	11	20	17	3	1	22	41
Don't know	1			1		1			1	
	79	**68**	**18**	**30**	**46**	**41**	**13**	**2**	**64**	**81**

	By gender		By age					By education level		
% of volunteers	Male	Female	Up to 18	19-30	31-45	46-60	Over 60	None	Prim/Mon	Higher level
Yes	61%	50%	28%	60%	57%	56%	77%	50%	64%	49%
No	38%	50%	72%	37%	43%	41%	23%	50%	34%	51%
Don't know	1%			3%		2%			2%	
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Summary of key points on demographics

- Female volunteer respondents slightly lower than males (46% to 54%), mainly due to high percentage of male respondents from Sittwe township (83%).
- Most volunteers have received some form of education, with the percentage of those with education level higher than primary/monastic level greater among female volunteers.
- Only a few volunteers consider themselves to have a disability – 6 out of the 147 interviewed.
- While the average percentage of volunteers who have attended DRR training is 50%, the percentage is naturally higher among the exit/consolidation villages but still about 25% of the volunteers in these villages have not yet attended DRR training.

III.2 Disaster Risk, CBDRR and Climate Change awareness

Disaster Risk

Volunteers' understanding of the term "Disaster Risk" appears higher as a percentage of respondents from the exit villages than the consolidation or new villages combined. But within the group of new villages, the percentages who say they understand is higher for two of the new intervention areas than the old or consolidation villages. The percentage is particularly high for NgaPuDaw at 92% (Table III.2.).

TABLE III.2.1 – Volunteers who say they understand the term "disaster risk"

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By intervention			
Intervention level	Exit	Consol	Consol	New	New	New		Exit	Consol	New	Total
Yes	31	17	18	22	11	5	104	31	35	38	104
Sort of	7	4	1				12	7	5		12
No	3	3	8	15	1	1	31	3	11	17	31
	41	**24**	**27**	**37**	**12**	**6**	**147**	**41**	**51**	**55**	**147**
% of totals											
Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By intervention			
Intervention level	Exit	Consol	Consol	New	New	New		Exit	Consol	New	Total
Yes	76%	71%	67%	59%	92%	83%	71%	76%	69%	69%	71%
Sort of	17%	17%	4%				8%	17%	10%		8%
No	7%	13%	30%	41%	8%	17%	21%	7%	22%	31%	21%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Chart III.2.1 and Chart III.2.2 below show the variations in the declarations of understanding between gender, education level and age of volunteer respondents.

CHART III.2.1 – Understanding of "disaster risk" by gender and education (% of volunteers)

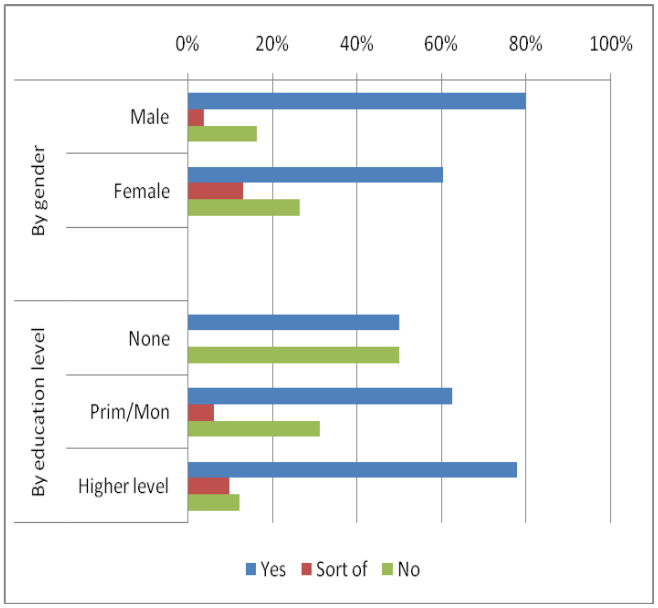
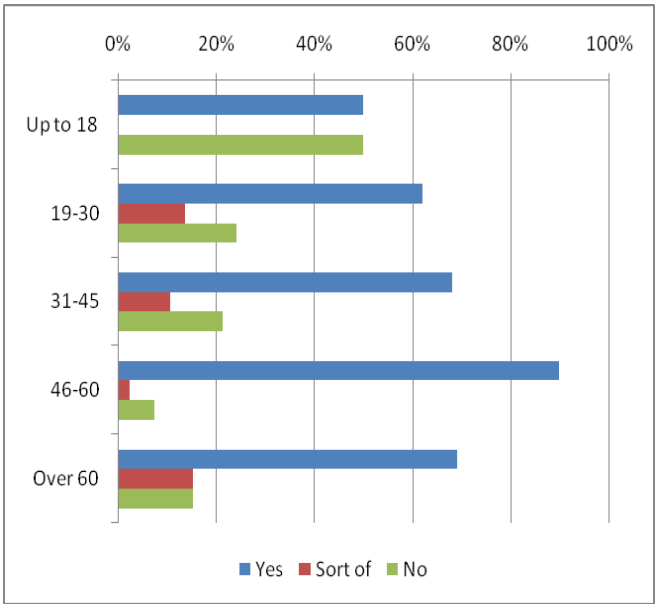


CHART III.2.2 – Understanding of "disaster risk" by age groups (% of volunteers)



These charts show that more male volunteers consider they understand the term "disaster risk" than female volunteers. There is a progressively higher understanding from lowest levels of education to the highest. Among age groups, there is slightly higher percentage of those with understanding among the older age groups than the younger ones.

The responses given above were the volunteers' own assessment as to whether they understood this term or not. A follow up question to those volunteers who answered positively ("yes" or "sort of") explored further what they meant by this term in order to judge whether this own assessment was indeed as they determined.

The analysis of the responses given (more than the 116 volunteers who answered positively as some of them gave more than one response) is shown in the Table III.2.2 below. The responses are graded according to degree of correctness as, while many of them have some ideas of what disaster risk means (although their descriptions do not meet standard definitions of the term), there are a number of responses which cannot be accepted as a clear understanding of the term.

TABLE III.2.2 – What Volunteers mean by the term "disaster risk"

	Township	Asssessment of	Labutta	Pathein	Pyapon		NgaPuDa	Sittwe	Total
	Intervention level	responses	Exit	Consol	Consol	New	New	New	
1	Older age, children, sick people, disable people, pregnant woman/ Vulnerable people	Partly, understand issue of vulnerability	5		1	2			8
2	Have no early warning	Partly, no EWS put communities at risk	8		1	1	1		11
3	Have little knowledge on disaster	Partly, lack of knowledge put communities at risk	1	3		2		1	7
4	In the time of storm, electrical power is higher, not safe and dangerous due to destruction of light post	Partly, as understand elements at risk					1	1	2
5	To reduce loss, must save, make precaution and make cooperation with government	Partly, as understand element of capacity	1	1					2
6	Listening to the news and make precaution	Partly, as understand element of capacity			1			1	2
7	Destruction of road and education	NO - these are consequences of disaster	2						2
8	A lot of destruction due to flood, fire and storm	NO - these are consequences of disaster					2		2
9	Loss of food/ water/ household assets/ clothes/ business	NO - these are consequences of disaster	25	17	15	16	7	2	82
10	Animals	NO - not clear what is meant	7			1			8
	Multiple responses		**49**	**21**	**18**	**22**	**11**	**5**	**126**

It can be seen from the table above that the highest number of responses (item #9 in the table) relates more to "disasters" than to "disaster risk". It can be assumed that those who touched on elements at risk, vulnerability and capacity have some understanding of the term but possibly did not have time to explain in detail to the interviewer. But discounting the responses that are not correct means that there is still a need to reinforce understanding of this term even among the exit and consolidation villages.

Exploring more specifically the volunteers' understanding of disaster risk, they were asked which elements should be addressed. Table III.2.3 below shows the number and percentage of respondents who selected each of the elements as well as those who could not answer at all.

TABLE III.2.3 – Elements that can be addressed to reduce risk

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By intervention			
Intervention level	Exit	Consol	Consol	New	New	New		Exit	Consol	New	Total
Don't know	10	1	4	9	1		25	10	5	10	25
Hazard probability exposure	9	5	3	3	5	4	29	9	8	12	29
Vulnerability	15	9	4	1	2	3	34	15	13	6	34
Capacity	19	19	15	13	10	4	80	19	34	27	80
	53	**34**	**26**	**26**	**18**	**11**	**168**	**53**	**60**	**55**	**168**

% of respondents who answered each aspect

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By intervention			
Intervention level	Exit	Consol	Consol	New	New	New		Exit	Consol	New	Total
Don't know	24%	4%	15%	24%	8%		17%	24%	10%	18%	17%
Hazard probability exposure	22%	21%	11%	8%	42%	67%	20%	22%	16%	22%	20%
Vulnerability	37%	38%	15%	3%	17%	50%	23%	37%	25%	11%	23%
Capacity	46%	79%	56%	35%	83%	67%	54%	46%	67%	49%	54%

The low percentages in the table above suggests that no respondents were able to identify all the elements. However, within these figures are 8 respondents who did identify all three (4 in Labutta and 4 in Pyapon – with 3 of the 4 in Pyapon from the new villages). The need to address capacity was identified by more respondents than other elements that should be addressed. Comparing these responses across gender, age and education levels shows relatively little differences between genders but a higher percentage of those with higher level of education identified more elements that should be addressed (Table III.2.4). Between the ages, a higher percentage of younger age groups were not able to answer at all compared to the older age groups.

TABLE III.2.4 – Elements that can be addressed to reduce risk (by gender, age & education)

	By gender		By age					By education level		
# volunteers	Male	Female	Up to 18	19-30	31-45	46-60	Over 60	None	Prim/Mon	Higher level
Don't know	12	13	3	9	6	6	1		11	14
Hazard probability	18	11	1	7	9	12			6	23
Vulnerability	20	14		5	9	16	4	1	11	22
Capacity	47	33	6	11	30	24	9	1	29	50
	97	**71**	**10**	**32**	**54**	**58**	**14**	**2**	**57**	**109**

% of respondents who answered each aspect

	By gender		By age					By education level		
% volunteers	Male	Female	Up to 18	19-30	31-45	46-60	Over 60	None	Prim/Mon	Higher level
Don't know	15%	19%	17%	31%	13%	15%	8%		17%	17%
Hazard probability	23%	16%	6%	24%	19%	30%			9%	28%
Vulnerability	25%	21%		17%	19%	40%	31%	50%	17%	27%
Capacity	59%	49%	33%	38%	64%	60%	69%	50%	45%	62%

Volunteers were then asked about each of these three elements – whether the element should be reduced or enhanced in order to reduce risk. The responses are presented in Tables III.2.5, III.2.6 and III.2.7 below.

TABLE III.2.5 – How hazard probability should be addressed to reduce risk

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By intervention			
Intervention level	Exit	Consol	Consol	New	New	New		Exit	Consol	New	Total
Reduce	32	21	18	19	10	4	104	32	39	33	104
Enhance						1	1			1	1
Nothing	5				1		6	5		1	6
Don't know	1		1	3			5	1	1	3	5
	38	**21**	**19**	**22**	**11**	**5**	**116**	**38**	**40**	**38**	**116**

% of responses

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By intervention			
Intervention level	Exit	Consol	Consol	New	New	New		Exit	Consol	New	Total
Reduce	84%	100%	95%	86%	91%	80%	90%	84%	98%	87%	90%
Enhance						20%	1%			3%	1%
Nothing	13%				9%		5%	13%		3%	5%
Don't know	3%		5%	14%			4%	3%	3%	8%	4%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

TABLE III.2.6 – How vulnerability should be addressed to reduce risk

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By intervention			
Intervention level	Exit	Consol	Consol	New	New	New		Exit	Consol	New	Total
Reduce	36	21	19	20	11	5	112	36	40	36	112
Enhance											
Nothing	1						1	1			1
Don't know	1			2			3	1		2	3
	38	**21**	**19**	**22**	**11**	**5**	**116**	**38**	**40**	**38**	**116**

% of responses

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By intervention			
Intervention level	Exit	Consol	Consol	New	New	New		Exit	Consol	New	Total
Reduce	95%	100%	100%	91%	100%	100%	97%	95%	100%	95%	97%
Enhance											
Nothing	3%						1%	3%			1%
Don't know	3%			9%			3%	3%		5%	3%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

TABLE III.2.7 – How capacity should be addressed to reduce risk

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By intervention			
Intervention level	Exit	Consol	Consol	New	New	New		Exit	Consol	New	Total
Reduce		2	1		1	2	6		3	3	6
Enhance	37	19	18	20	10	3	107	37	37	33	107
Nothing											
Don't know	1			2			3	1		2	3
	38	**21**	**19**	**22**	**11**	**5**	**116**	**38**	**40**	**38**	**116**

% of responses

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By intervention			
Intervention level	Exit	Consol	Consol	New	New	New		Exit	Consol	New	Total
Reduce		10%	5%		9%	40%	5%		8%	8%	5%
Enhance	97%	90%	95%	91%	91%	60%	92%	97%	93%	87%	92%
Nothing											
Don't know	3%			9%			3%	3%		5%	3%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

The three tables above show that although responses to the elements to be addressed in the previous question were limited, when asked specifically about how to address each element, the percentage of correct responses was much higher.

Community Based Disaster Risk Reduction (CBDRR)

When asked whether they understood anything about the process or phases of CBDRR, on average 50% said they understood, with another 10% saying they "sort of" understood (Table III.2.8). The township with the highest positive responses was Pathein – a consolidation area, with a higher percentage of positive responses than the exit area of Labutta (where 34% said they did not understand CBDRR process).

TABLE III.2.8 – Understanding of CBDRR processes

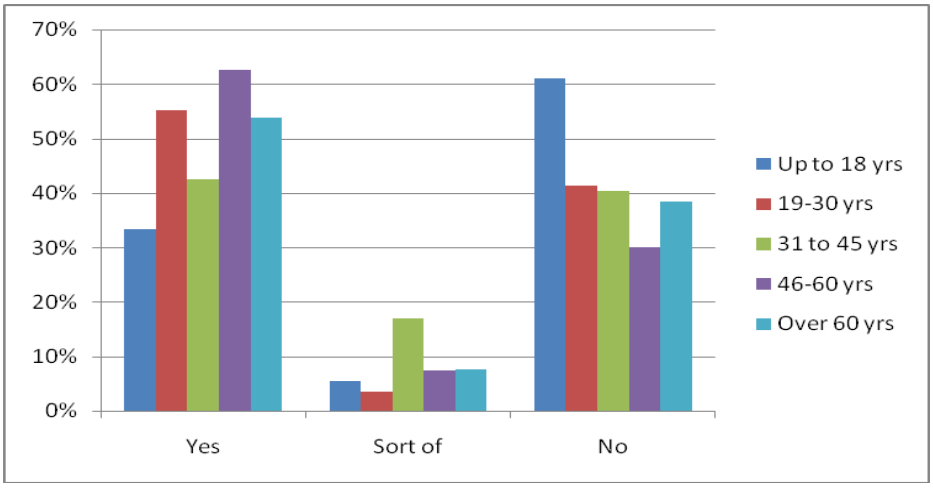
Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By intervention			
Intervention level	Exit	Consol	Consol	New	New	New		Exit	Consol	New	Total
Yes	21	17	15	14	3	4	74	21	32	21	74
Sort of	6	4	2	1	1		14	6	6	2	14
No	14	3	10	22	8	2	59	14	13	32	59
	41	**24**	**27**	**37**	**12**	**6**	**147**	**41**	**51**	**55**	**147**

% of respondents

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By intervention			
Intervention level	Exit	Consol	Consol	New	New	New		Exit	Consol	New	Total
Yes	51%	71%	56%	38%	25%	67%	50%	51%	63%	38%	50%
Sort of	15%	17%	7%	3%	8%		10%	15%	12%	4%	10%
No	34%	13%	37%	59%	67%	33%	40%	34%	25%	58%	40%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

While there were no significant differences in the percentage of responses between genders or education levels, comparing responses among age groups again showed a generally higher percentage of positive responses among the older age groups, with the exception of the age group "19 to 30 years" who responded quite positively (Chart III.2.3).

CHART III.2.3 – Understanding of CBDRR processes by age groups (% of volunteers)



As with disaster risk described above, volunteers who answered positively (yes or sort of) were tested with a question as to what they understood by the term CBDRR. The responses showed that although technical terms such as preparedness, response etc. were not used, the descriptions given show some understanding of the CBDRR processes – and it should be understood that generally the responses to such a broad question are not always complete. Table III.2.9 summarizes the responses provided.

TABLE III.2.9 – What volunteers understand by CBDRR processes

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
To reduce destruction, make precaution, management, rescue, find the loss people and make documentation.	12	15	8	6	3		44
Sharing the knowledge	3	1				2	6
Building shelter which can defend against wind and rain	4	3		1	1		9
Plant trees	4			1			5
Share the information, send older people, disabled people and animals to safe place	8	5	2	3		1	19
Cooperation with others, make real practices based on experiences/ attend training	1	2	1	1			5
Establish voluntary organization like first aid, searching, precaution. capacity building	1	5	3	2			11
Go to safe place; prepare emergency supplies; make clinic, excavation for the drinking water; build roads and bridges.	2	3	2			2	9
Storing food and medicines	2			1	1		4
In coastal area, maintain the coastal forest.					1		1
Arrange the emergency exit and runway.					1		1
Make cooperation with task force.		2					2
	37	**36**	**16**	**15**	**7**	**5**	**116**

Volunteers were then asked if they could name the four different phases of disaster management. Of the 88 volunteers who said they knew something (or sort of) about CBDRR, 12 of those could not name any of the four phases. Of the 76 who gave responses, only 12 could name all four, with 32 volunteers naming three, 20 naming two and the other 12 naming only one of the four phases. Significantly the 12 volunteers who named all four phases were in either in the exit township of Labutta (9 volunteers) or Pathein (consolidation – 3 volunteers).

Table III.2.10 shows the total responses to each phase and the percentage of all volunteers who could name each of the phases.

TABLE III.2.10 – Volunteers who could name the phases of disaster management

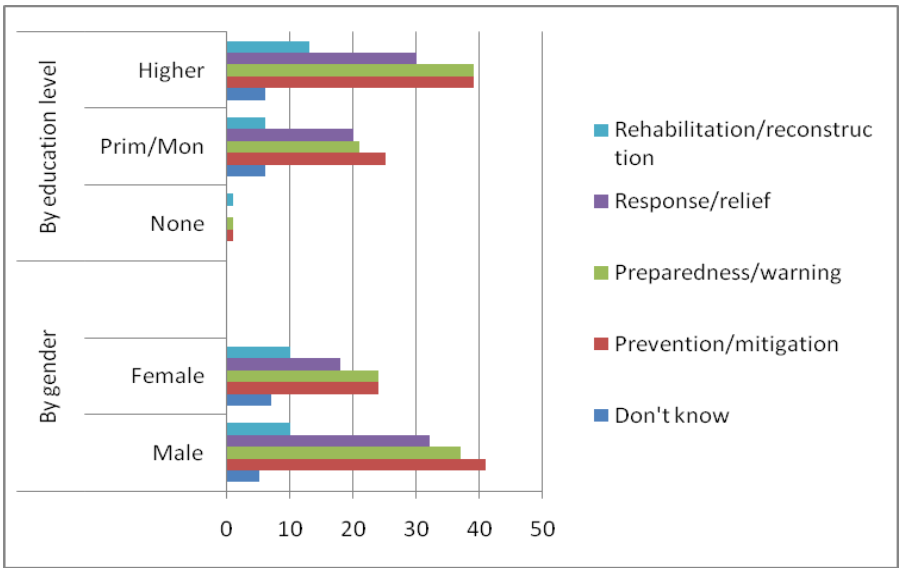
Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	**Exit**	**Consol**	**Consol**	**New**	**New**	**New**	
Don't know	2	4	1	3	2		12
Prevention/mitigation	20	14	13	12	2	4	65
Preparedness/warning	22	13	14	8	1	3	61
Response/relief	17	14	11	5		3	50
Rehabilitation/reconstruction	12	7				1	20
Multiple responses	**73**	**52**	**39**	**28**	**5**	**11**	**208**

% of all respondents

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	**Exit**	**Consol**	**Consol**	**New**	**New**	**New**	
Don't know	5%	17%	4%	8%	17%		8%
Prevention/mitigation	49%	58%	48%	32%	17%	67%	44%
Preparedness/warning	54%	54%	52%	22%	8%	50%	41%
Response/relief	41%	58%	41%	14%		50%	34%
Rehabilitation/reconstruction	29%	29%				17%	14%

Analysis by education level again showed a higher level of understanding among the volunteers with higher levels of education and comparison by gender showed higher understanding of the four phases among male volunteers (Chart III.2.4).

CHART III.2.4 – Volunteers who could name phases of disaster management (# of respondents by gender and education)



Continuing the assessment of understanding on disaster management processes, volunteers were asked if they knew at least one thing that the community could do in each of the four phases. The percentage of positive responses was very high to this question, with almost 70% of volunteers saying they knew at least one thing to do in all four phases. The summary of all responses is shown in Table III.2.11 below.

TABLE III.2.11 – Know at least one thing to do in each phase

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By intervention			
Intervention level	Exit	Consol	Consol	New	New	New		Exit	Consol	New	Total
Prevention/mitigation	40	22	27	33	10	5	137	40	49	48	137
Preparedness/warning	40	23	25	33	10	4	135	40	48	47	135
Response/relief	38	16	25	28	8	3	118	38	41	39	118
Rehabilitation/reconstruction/	36	14	26	29	9	1	115	36	40	39	115
	154	**75**	**103**	**123**	**37**	**13**	**505**	**154**	**178**	**173**	**505**

% of all respondents

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By intervention			
Intervention level	Exit	Consol	Consol	New	New	New		Exit	Consol	New	Total
Prevention/mitigation	98%	92%	100%	89%	83%	83%	93%	98%	96%	87%	93%
Preparedness/warning	98%	96%	93%	89%	83%	67%	92%	98%	94%	85%	92%
Response/relief	93%	67%	93%	76%	67%	50%	80%	93%	80%	71%	80%
Rehabilitation/reconstruction/	88%	58%	96%	78%	75%	17%	78%	88%	78%	71%	78%

In general there were more volunteers who say they knew methods of prevention/mitigation as well as preparedness/warning than the other two phases. To test whether their understanding of what to do was indeed correct, volunteers were then asked to give examples of what they could do in each of these phases. The coding of responses was a bit broad, with many items linked to the same code so the consultant has re-organized these responses as shown in Tables III.1.12 (a-d) below before presenting the results by township/intervention stage.

TABLE III.2.12a – Examples given for what to do regarding Prevention/Mitigation

SN	Coded responses	Reclassification of responses
1	Listening to the news. Learning to get knowledge. Study and observe about the hazards	Building understanding
2	Prepare for the living place, food and medicine. Build bridges	Structural/non-structural mitigation
3	(Pay attention to) Old age/ Children/ Sick people	Understanding vulnerable groups
4	Take precaution during pre-monsoon and post-monsoon.	Precaution to reduce possible impact
5	Early warning/ Take precaution before hazard/ Sent to the safe place	Relates more to Preparedness/warning
6	Plant the trees/ Build strong buildings/ Home/ Prepare the lifeboat/ Tie the house with ropes/ Prepare the banana trunk	Relates more to Preparedness/warning (but with elements of mitigation)
7	Save and collect important documents and medicines/ pack the things	Relates more to Preparedness/warning
8	Run to the safe high lands/ Make easier to run to the shelter/ Run to the nearest place	Relates more to Preparedness/warning
9	Prepare water can, Prevent with big trees	Relates more to Preparedness/warning
10	Attending trainings	Building understanding
11	Practice in group training and share to other people continuously	Building understanding

TABLE III.2.12b – Examples given for what to do regarding Preparedness/warning

SN	Coded responses	Reclassification of responses
1	Strengthen the existing houses/ Repair the roofs and walls of the house	Strengthen house quality
2	Prepare the important documents/ Prepare and collect the household assets/ Prepare the necessary things	Prepare important documents/assets
3	Give warning/ give information to (vulnerable groups/ family) (give information with a horn)/ Listen the instruction from the community authorities	Establish EWS to include vulnerable groups
4	Prepare food/ medicine/ water/ things like torch light, life-saver can,…	Prepare day to day essentials
5	Go to the safety place/ older age	Take precaution to avoid disaster
6	Prepare for the road	Relates more to mitigation
7	Misc (not coded)	Ignore as unclear

TABLE III.2.12c – Examples given for what to do regarding Response/Relief

SN	Coded responses	Reclassification of responses
1	Fix safety places for children/ elder people/ older age/ disable people/ wounded people/ Rescue the sick people and make funeral for the dead people	Ensure needs of vulnerable groups
2	Put the people in safety place/ Run to the safe place/ Go to rescue the people from disaster place	Use safe areas/Search and Rescue
3	Share the dried food	Sharing and helping each other
4	Advertising about (refugee/ people flood with water/ injured people)	Information sharing for assistance
5	Inform after listening to the news (From committee to community)	Relates more to Preparedness/Warning
6	Give warning about the weather forecasting news/ Sharing the information to people who are travelling far	Relates more to Preparedness/Warning
7	Give first-aid	Give first aid where needed
8	Rescue eg. Rescue by using boat or motor bicycle	Search and Rescue

TABLE III.2.12d – Examples given for what to do regarding Rehabilitation/Reconstruction

SN	Coded responses	Reclassification of responses
1	Strengthen the houses for emergency shelter/ Strengthen the existing pagoda and temples	Strenghening HH & community infrastructure
2	Maintain and repair the road	Repair community infrastructure
3	Support with food, medicine and necessary things by cooperating with other organization	Relates more to Response/Relief
4	Repair the damage, Repair the buildings and road	Repair community infrastructure
5	Guide the people to safety places, health care clinic or center	Relates more to Response/Relief
6	Have quick resilient on self help basis	Rebuilding resilient livelihoods
7	Organize to meet the rest of survival family member/ Cooperate with the survival people to do the necessary tasks	Relates more to Response/Relief

The responses per township to the above questions are now presented using the reclassified codes, cumulating similar items together – see Tables III.2.13 (a-d).

TABLE III.2.13a – Examples of Prevention/Mitigation by township (# & %)

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By intervention			
Intervention level	Exit	Consol	Consol	New	New	New		Exit	Consol	New	Total
Building understanding	3	3	6	3	2		17	3	9	5	17
Structural/non-structural mitigation	3	3	2	2			10	3	5	2	10
Understanding vulnerable groups	5	3	2	6	1		17	5	5	7	17
Precaution to reduce possible impact	1						1	1			1
Relates more to Preparedness/warning	32	13	17	23	7	5	97	32	30	35	97
	44	**22**	**27**	**34**	**10**	**5**	**142**	**44**	**49**	**49**	**142**

%'s of all respondents

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By intervention			
Intervention level	Exit	Consol	Consol	New	New	New		Exit	Consol	New	Total
Building understanding	7%	13%	22%	8%	17%		12%	7%	18%	9%	12%
Structural/non-structural mitigation	7%	13%	7%	5%			7%	7%	10%	4%	7%
Understanding vulnerable groups	12%	13%	7%	16%	8%		12%	12%	10%	13%	12%
Precaution to reduce possible impact	2%						1%	2%			1%
Relates more to Preparedness/warning	78%	54%	63%	62%	58%	83%	66%	78%	59%	64%	66%

The reclassification of responses shows that the majority of responses given for prevention/mitigation would have been more appropriate for the next category of Preparedness/Warning. There is often some confusion between these two categories and also possibility of many overlaps so it is not so surprising to find this, considering the relatively short time many of these volunteers have been exposed to disaster management theory – although it is a bit surprising to see higher level of confusion among the volunteers in the exit township.

TABLE III.2.13b – Examples of Preparedness/warning by township (# & %)

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By intervention			
Intervention level	Exit	Consol	Consol	New	New	New		Exit	Consol	New	Total
Strengthen house quality	9	1	2	7	1	1	21	9	3	9	21
Prepare important documents/assets	7	2	4	4			17	7	6	4	17
Establish EWS to include vulnerable grou	18	19	15	14	6	2	74	18	34	22	74
Prepare day to day essentials	10		2	5			17	10	2	5	17
Take precaution to avoid disaster	5	2	2	3	2	1	15	5	4	6	15
Relates more to mitigation				1			1			1	1
	49	**24**	**25**	**34**	**9**	**4**	**145**	**49**	**49**	**47**	**145**

%'s of all respondents

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By intervention			
Intervention level	Exit	Consol	Consol	New	New	New		Exit	Consol	New	Total
Strengthen house quality	22%	4%	7%	19%	8%	17%	14%	22%	6%	16%	14%
Prepare important documents/assets	17%	8%	15%	11%			12%	17%	12%	7%	12%
Establish EWS to include vulnerable grou	44%	79%	56%	38%	50%	33%	50%	44%	67%	40%	50%
Prepare day to day essentials	24%		7%	14%			12%	24%	4%	9%	12%
Take precaution to avoid disaster	12%	8%	7%	8%	17%	17%	10%	12%	8%	11%	10%
Relates more to mitigation				3%			1%			2%	1%

The examples given above for preparedness/warning are practically all relevant examples and shows a good level of awareness of what can be done to in relation to preparedness and early warnings. Establishing warning systems was highlighted by the highest percentage of all volunteers.

TABLE III.2.13c – Examples of Response/Relief by township (# & %)

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By intervention			
Intervention level	Exit	Consol	Consol	New	New	New		Exit	Consol	New	Total
Ensure needs of vulnerable groups	19	5	3	5	2		34	19	8	7	34
Give first aid where needed	1	2	1	1	1		6	1	3	2	6
Search and Rescue	2	4	10	10	2	1	29	2	14	13	29
Use safe areas/Search and Rescue	10	6	4	5	4	2	31	10	10	11	31
Information sharing for assistance	4	2	6	6			18	4	8	6	18
Sharing and helping each other	2						2	2			2
Relates more to Preparedness/Warning	4			1			5	4		1	5
	42	**19**	**24**	**28**	**9**	**3**	**125**	**42**	**43**	**40**	**125**

%'s of all respondents

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By intervention			
Intervention level	Exit	Consol	Consol	New	New	New		Exit	Consol	New	Total
Ensure needs of vulnerable groups	46%	21%	11%	14%	17%		23%	46%	16%	13%	23%
Give first aid where needed	2%	8%	4%	3%	8%		4%	2%	6%	4%	4%
Search and Rescue	5%	17%	37%	27%	17%	17%	20%	5%	27%	24%	20%
Use safe areas/Search and Rescue	24%	25%	15%	14%	33%	33%	21%	24%	20%	20%	21%
Information sharing for assistance	10%	8%	22%	16%			12%	10%	16%	11%	12%
Sharing and helping each other	5%						1%	5%			1%
Relates more to Preparedness/Warning	10%			3%			3%	10%		2%	3%

As with the previous section, the majority of responses accurately identified things that could be done in response to a disaster. The majority of volunteers identified the need to focus on vulnerable groups and the importance of first aid/search and rescue were also raised by a high percentage of the volunteers. Understanding on addressing the needs of vulnerable groups was highest in Labutta, with almost 50% of volunteers mentioning this as an example of what should be done at the response stage.

TABLE III.2.13d – Examples of Rehabilitation/Reconstruction by township (# & %)

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By intervention			
Intervention level	Exit	Consol	Consol	New	New	New		Exit	Consol	New	Total
Strenghening HH & community infrastru	14	1	4	3	1		23	14	5	4	23
Repair community infrastructure	15	10	9	7	6	1	48	15	19	14	48
Rebuilding resilient livelihoods	9	2	9	13	1		34	9	11	14	34
Relates more to Response/Relief	9	5	9	11	3		37	9	14	14	37
	47	**18**	**31**	**34**	**11**	**1**	**142**	**47**	**49**	**46**	**142**

%'s of all respondents

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By intervention			
Intervention level	Exit	Consol	Consol	New	New	New		Exit	Consol	New	Total
Strenghening HH & community infrastru	34%	4%	15%	8%	8%		16%	34%	10%	7%	16%
Repair community infrastructure	37%	42%	33%	19%	50%	17%	33%	37%	37%	25%	33%
Rebuilding resilient livelihoods	22%	8%	33%	35%	8%		23%	22%	22%	25%	23%
Relates more to Response/Relief	22%	21%	33%	30%	25%		25%	22%	27%	25%	25%

On average among the townships, 25% of examples given were more related to the response phase of disaster management as the issues they raised were tasks that should be carried out in the immediate aftermath of a disaster. Apart from these examples however, there were a number of good examples of what can be done in the recovery phase, with the largest number of responses identifying community infrastructure. On a household level, improving house quality and building livelihoods that are resilient to disasters were also good examples identified. The responses did not differ significantly between intervention stages with the exception of a higher percentage of volunteers in Labutta raising the combination of improved household and community infrastructure.

Climate Change

Almost 75% of all volunteers say they understand what the term "climate change" means. In fact all volunteers interviewed in the new areas of NgaPuDaw and Sittwe say they understand, with slightly lower percentages than the average in Pyapon.

TABLE III.2.14 – Understanding of Climate Change by township (# & %)

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By intervention			
Intervention level	Exit	Consol	Consol	New	New	New		Exit	Consol	New	Total
Yes	32	17	18	24	12	6	109	32	35	42	109
Sort of	2	2					4	2	2		4
No	7	5	9	13			34	7	14	13	34
	41	**24**	**27**	**37**	**12**	**6**	**147**	**41**	**51**	**55**	**147**

% of all volunteers

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By intervention			
Intervention level	Exit	Consol	Consol	New	New	New		Exit	Consol	New	Total
Yes	78%	71%	67%	65%	100%	100%	74%	78%	69%	76%	74%
Sort of	5%	8%					3%	5%	4%		3%
No	17%	21%	33%	35%			23%	17%	27%	24%	23%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

The differences between male and females was not significant, but with a slightly higher percentage of males saying they understood what climate change meant. Comparing responses by age showed a higher percentage of understanding among the older age groups. Apart from the positive response from the two volunteers who have received no formal education, generally those with higher education levels had the highest level of knowledge (Table III.2.15).

TABLE III.2.15 – Understanding of Climate Change by gender, age & education (# & %)

	By gender		By age					By education level		
	Male	Female	Up to 18	19-30	31-45	46-60	Over 60	None	Prim/Mon	Higher level
Yes	61	48	11	19	34	35	10	2	38	69
Sort of	2	2		1	2		1		2	2
No	16	18	7	9	11	5	2		24	10
	79	**68**	**18**	**29**	**47**	**40**	**13**	**2**	**64**	**81**

% of all volunteers

	By gender		By age					By education level		
	Male	Female	Up to 18	19-30	31-45	46-60	Over 60	None	Prim/Mon	Higher level
Yes	77%	71%	61%	66%	72%	88%	77%	100%	59%	85%
Sort of	3%	3%		3%	4%		8%		3%	2%
No	20%	26%	39%	31%	23%	13%	15%		38%	12%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

When asked to explain briefly what they meant by climate change, the responses showed that indeed the majority of those who said they understood the term did actually understand something about climate change (at least some the causes and some of them the consequences). Table III.2.16 below shows that all the responses given could be accepted as some level of understanding with the exception of the last one which is a bit vague and this issue of pollution focuses on garbage rather than giving industrial pollution.

TABLE III.2.16 – Meanings given for "climate change"

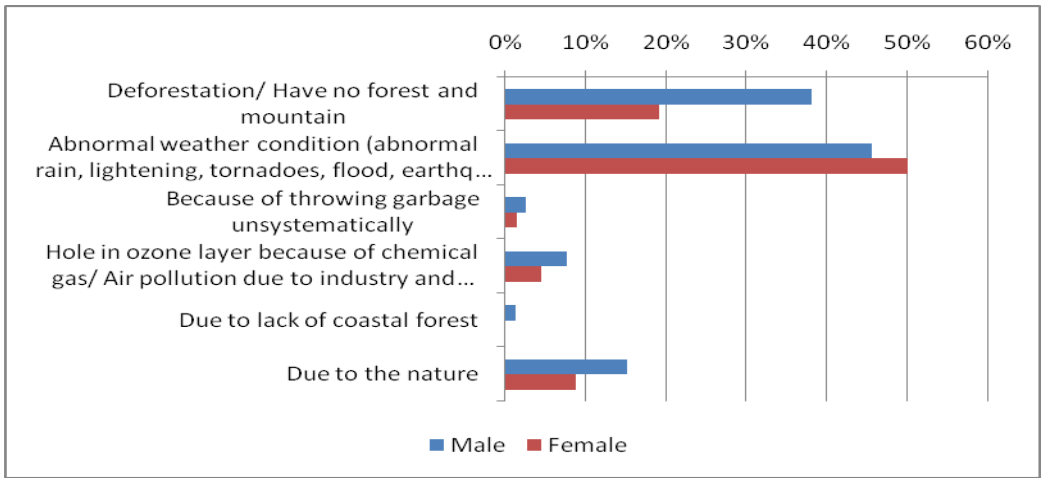
Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Deforestation/ Have no	16	5	7	11	4		43
Abnormal weather condition (abnormal rain,	23	13	8	13	8	5	70
Because of throwing garbage unsystematically	1	1	1				3
Hole in ozone layer because of chemical gas/	3	1	1	1	3		9
Due to lack of coastal forest			1				1
Due to the nature	11	5	1			1	18
Multiple responses	**54**	**25**	**19**	**25**	**15**	**6**	**144**

%'s of all respondents

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Deforestation/ Have no	39%	21%	26%	30%	33%		29%
Abnormal weather condition (abnormal rain,	56%	54%	30%	35%	67%	83%	48%
Because of throwing garbage unsystematically	2%	4%	4%				2%
Hole in ozone layer because of chemical gas/	7%	4%	4%	3%	25%		6%
Due to lack of coastal forest			4%				1%
Due to the nature	27%	21%	4%			17%	12%

Analysis of the meanings of climate change given between genders, shows that the percentage of female responses for each of the meanings given was lower than those from male volunteers in all cases except for "abnormal weather" (Chart III.2.5).

CHART III.2.5 – Meanings given for "climate change" by gender (% of respondents)



Summary of key points on Disaster Risk, CBDRR and Climate Change awareness

- Over 70% of volunteers say they understand the term "Disaster Risk", with very high percentages of volunteers in the new areas of NgaPuDaw and Sittwe, 92% and 83% respectively. But when asked the meaning of disaster risk, the majority gave responses closer to the definition of a disaster rather than "disaster risk". So there is some need for further coaching on this, even in the exit and consolidation villages.
- Regarding the elements to be addressed, only 8 volunteers could name all three elements (hazard probability, vulnerability, capacity). A higher percentage (54%) identified capacity as one of the elements, with less than 25% naming the other two. However, when specifically asked about each of these three elements, there were very high accurate responses to what should be done – in particular, 97% say vulnerability should be reduced and 92% saying capacity should be enhanced.
- Regarding CBDRR, 50% of volunteers said they understood the term. The meaning they gave showed that indeed they did understand something about CBDRR process, although they did not describe in standard terminology.
- Less than 50% could identify each phase (ranging from 44% who identified prevention/mitigation to only 14% who identified rehabilitation/reconstruction). Compared to the overall averages, the percentages for exit villages were slightly higher for all four phases but still less than 60% overall (and only 29% identifying rehabilitation/reconstruction).
- Over 70% said they knew something that could be done in each of the four phases. Examples given showed some overlap or confusion between prevention and preparedness but generally good examples for response and rehabilitation/reconstruction.
- About 75% of volunteers said they understood the term "Climate Change" (with all volunteers in the new villages of NgaPuDaw and Sittwe saying they understood). Examples given by the volunteers shows that they do indeed know some things about the causes and consequences of climate change even if they do not offer any standard definition.
- For all three issues explored in this chapter, knowledge among male volunteers was slightly higher than females; older volunteers had higher knowledge than the younger ones; and volunteers with higher levels of education had higher knowledge than those educated to primary/monastic level (two volunteers with no formal education showed high knowledge in some areas but the low number of volunteers in this category does not allow generalization of the result).

III.3 Hazard Awareness & Preparedness

Before analyzing awareness on hazards and preparedness, volunteers were asked about the types of hazards that have occurred in the last 10 years. Table III.3.1 below shows that all respondents reported Tsunami as having occurred and most of them also noted cyclones/strong storms. Floods were mentioned by 24% (but highest in Pyapon) and earthquakes by 10%. Other hazards were only mentioned by a few volunteers.

TABLE III.3.1 – Hazards in the last 10 years (# & % of volunteers who mentioned)

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Tsunami	41	24	27	37	12	6	147
Cyclone/strong storm	40	24	26	37	11	5	143
Flood	10	1	10	9	4	1	35
Earthquake	4	2		2	6		14
Tornado/wind funnel	1		3	1			5
Fire	1					3	4
Landslide						1	1
Drought	1				1		2
Erosion/loss land						1	1
Epidemic (humans)	2				1		3
Total HHs who responded	**41**	**24**	**27**	**37**	**12**	**6**	**147**

% of all respondents

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Tsunami	100%	100%	100%	100%	100%	100%	100%
Cyclone/strong storm	98%	100%	96%	100%	92%	83%	97%
Flood	24%	4%	37%	24%	33%	17%	24%
Earthquake	10%	8%		5%	50%		10%
Tornado/wind funnel	2%		11%	3%			3%
Fire	2%					50%	3%
Landslide						17%	1%
Drought	2%				8%		1%
Erosion/loss land						17%	1%
Epidemic (humans)	5%				8%		2%

The volunteers were then asked to rank the three hazards that had the greatest impact on their community. By far, the largest number of volunteers identified cyclones/storms as the hazard that had the greatest impact – 132 respondents (90%). Of the remaining 10%, the hazard that had the greatest impact was floods (7%). Table III.3.2 below summarizes the responses by number and percentage of volunteers who reported.

TABLE III.3.2 – Hazard that had the greatest impact on the community

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Cyclone/strong storm	40	24	20	34	10	4	132
Flood			7	3	1		11
Misc. others	1				1	2	4
	41	**24**	**27**	**37**	**12**	**6**	**147**

% of all respondents

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Cyclone/strong storm	98%	100%	74%	92%	83%	67%	90%
Flood			26%	8%	8%		7%
Misc. others	2%				8%	33%	3%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

There were limited responses to which hazard had the second biggest impact (54 out of the 147 respondents) and minimal responses to the third impact (only 11 responses). As the responses to the second and third impacts were often the reverse of the those given for first and second (e.g. those who did not identify cyclones/storms as number 1, put it at number 2), these tables are not presented here and the analysis of further questions on hazards concentrates on the main hazard (cyclones/ strong storm).

In order to assess the understanding of the volunteers as to the causes of these hazards, they were first asked why these hazards occur. Table III.3.3 presents an accumulation of answers to all three main hazards. The total of 212 responses is the total volunteers who responded to hazard 1 (all – 147) plus those who ranked a second hazard (54) plus those who mentioned a third (11).

TABLE III.3.3 – Why hazards occur (# & % of volunteers)

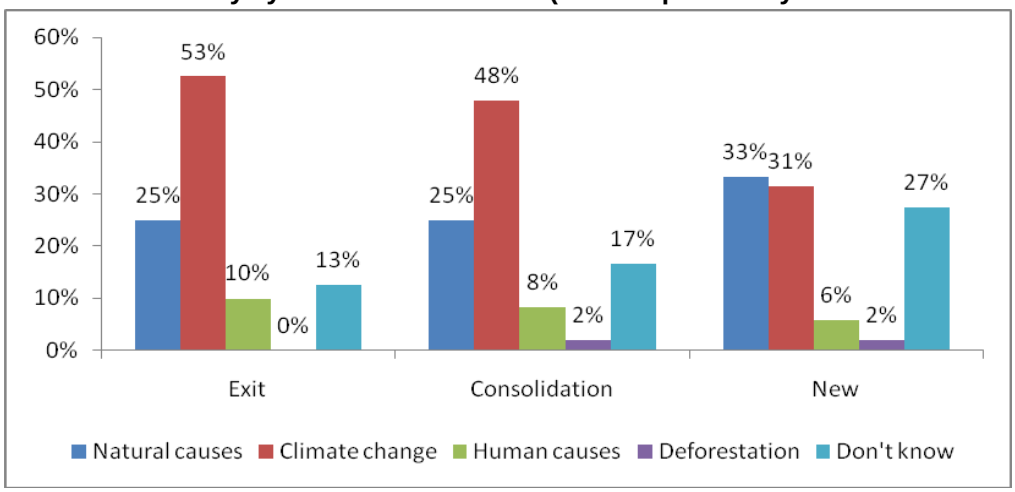
Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By intervention			
Intervention level	Exit	Consol	Consol	New	New	New		Exit	Consol	New	Total
Natural causes	26	8	9	14	7	7	71	26	17	28	71
Climate change	28	12	17	16	6	1	80	28	29	23	80
Human causes	7	3	3		3	2	18	7	6	5	18
Deforestation			1	1			2		1	1	2
Don't know	13	6	6	13	3		41	13	12	16	41
	74	**29**	**36**	**44**	**19**	**10**	**212**	**74**	**65**	**73**	**212**

Why did hazards occur (Summ all) % of responses

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By intervention			
Intervention level	Exit	Consol	Consol	New	New	New		Exit	Consol	New	Total
Natural causes	35%	28%	25%	32%	37%	70%	33%	35%	26%	38%	33%
Climate change	38%	41%	47%	36%	32%	10%	38%	38%	45%	32%	38%
Human causes	9%	10%	8%		16%	20%	8%	9%	9%	7%	8%
Deforestation			3%	2%			1%		2%	1%	1%
Don't know	18%	21%	17%	30%	16%		19%	18%	18%	22%	19%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

As the causes may differ from hazard to hazard, the responses above may not make much sense when added together so the information for the main hazard (cyclones/strong storms) is shown below by intervention level as Chart III.3.1. Numbers of responses for other hazards are too low to offer any form of generalization about understanding.

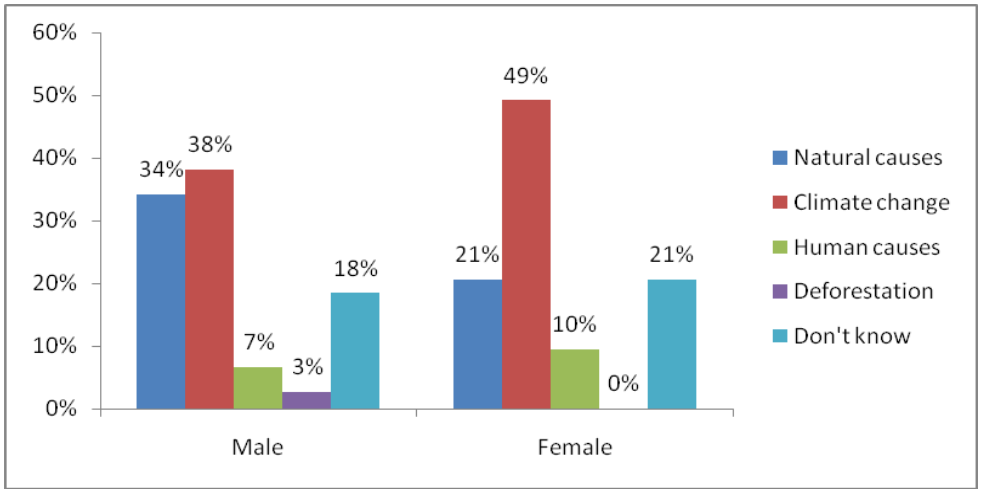
CHART III.3.1 – Why cyclones/storms occur (% of responses by intervention area)



The chart above shows that a higher percentage of volunteers in the new intervention areas don't know why such a hazard occurs compared to the exit and consolidation areas. Otherwise climate change, followed by natural causes, was the main reason mentioned. While some volunteers mentioned human causes, it should be noted that this question did not offer possibility for multiple answers; they could only choose one main reason.

Responses for this hazard (cyclones/strong storms) show some differences between male and female respondents (Chart III.3.2). A higher percentage of female volunteers noted climate change as the main cause whereas male responses were more evenly divided between natural causes and climate change.

CHART III.3.2 – Why cyclones/storms occur (% of responses – by gender)



Sources of information about these cyclones and storms came mainly from radio or TV (65% of responses). The next most important sources were the village or tract leaders (13%) and from family or friends (9%).

TABLE III.3.4 – Sources of information about cyclones/storms

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't remember	2	1	4	3			10
Radio/TV	38	23	20	33	8	5	127
Word of mouth (government)	3		1		1		5
Word of mouth (military/police)					2		2
Word of mouth (vill/tract head)	11	3	4	3	4		25
Word of mouth (family/friend)	9	3		3	1	1	17
Word of mouth (NGO/CBO/Rel org)	5	1	1	1			8
Multiple responses	**68**	**31**	**30**	**43**	**16**	**6**	**194**
% of responses							
Don't remember	3%	3%	13%	7%			5%
Radio/TV	56%	74%	67%	77%	50%	83%	65%
Word of mouth (government)	4%		3%		6%		3%
Word of mouth (military/police)					13%		1%
Word of mouth (vill/tract head)	16%	10%	13%	7%	25%		13%
Word of mouth (family/friend)	13%	10%		7%	6%	17%	9%
Word of mouth (NGO/CBO/Rel org)	7%	3%	3%	2%			4%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

While 5% of the volunteers said they received no information from the above sources, the others gave a mixture of responses (some more than one). The main types of information were about the possible impact of hazards, where they might occur and what time of year they could occur. Less volunteers received information about how to prepare for these hazards. The responses are shown in Table III.3.5 below.

TABLE III.3.5 – Types of information about cyclones/storms

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Nothing/no information	2	1	4	5	2		14
Impact	29	16	12	24	4	4	89
How often it occurs	6		6	7	1		20
What time of year	7	3	7	17	2	2	38
Where it affects	23	17	11	13	5		69
How to prepare	9	5	6	4	2	2	28
Multiple responses	**76**	**42**	**46**	**70**	**16**	**8**	**258**

% of responses

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Nothing/no information	3%	2%	9%	7%	13%		5%
Impact	38%	38%	26%	34%	25%	50%	34%
How often it occurs	8%		13%	10%	6%		8%
What time of year	9%	7%	15%	24%	13%	25%	15%
Where it affects	30%	40%	24%	19%	31%		27%
How to prepare	12%	12%	13%	6%	13%	25%	11%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

The next issue the volunteers were asked regarding this hazard (cyclones/storms) was how to prepare. Although multiple answers (from a range of 23 possible things to do), were allowed for this question, the majority of volunteers could only name three or less. Only 23 (16%) volunteers could name more than three, and the maximum named by any volunteer was six (three volunteers). Those who named more than three things were mostly from the consolidation area of Pathein (11 volunteers), with six others from the exit area of Labutta and the other few a mixture of the other areas. Table III.3.6 below lists the numbers of responses to each possible thing they could do to prepare.

TABLE III.3.6 – How to prepare for cyclones/storms (# of responses)

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	% of
Intervention level	Exit	Consol	Consol	New	New	New		Vol
Strengthen existing houses	32	15	2	8	4		61	41%
Stockplie food/water etc	3	2	9	16	1	2	33	22%
Make HH disaster plan		5	11	12		1	29	20%
Identify safe havens	16	5	1	1	1	2	26	18%
Village mitigation projects	10	8		1	5		24	16%
Relocate to safer place	2	2	8	9	2	1	24	16%
Establish evacuation protocol	6	7	2	1	3		19	13%
Make vill disaster plan	2	4	3		1	1	11	7%
Education/public awareness	3	5	2			1	11	7%
Save money	1	1	4	5			11	7%
Build safer houses	5	1			2		8	5%
Assess vulnerability		4	1			1	6	4%
Diversify livelihoods	2	1	2	1			6	4%
Help vulnerable people	3		1	2			6	4%
Teach children	1	1	1	1		1	5	3%
Assess hazards	1	2	1				4	3%
Protect important documents			4				4	3%
Teach grandparents	2	1					3	2%
Do simulations/practice	1						1	1%
Get information from internet	2						2	1%
Plant trees	1						1	1%
Nothing/don't know	2	5	6	4			17	12%
Multiple responses	**95**	**69**	**58**	**61**	**19**	**10**	**312**	

It can be seen from the table above that, although strengthening houses received the highest number of responses, still less than 50% of all volunteers could identify that as being a method of preparedness for cyclones/storms. Other issues were identified by less than 25% for all, and less than 10% of volunteers for most of the possible preparedness measures. The data does not suggest any significant higher level of knowledge among exit or consolidation villages compared to new villages.

Percentage of responses across gender, age and education did not show any significant differences between the different groups.

Summary of key points on Hazard Awareness and Preparedness

- All volunteers were aware of hazards and mentioned tsunamis and cyclones/storms as the ones that have occurred in their communities in the last 10 years. But the one hazard that has had the greatest impact has been cyclones/strong storms.
- A number of volunteers did not know the cause of these cyclones/storms. The percentage was highest in the new villages (27% of volunteers) compared to 17% in the consolidation villages and 13% in the exit villages of Labutta township.
- Among those who could identify the causes, climate change was given as the reason by the highest number of volunteers (and by more female than male volunteers).
- The main source of information about cyclones/storms for these volunteers was via the radio or TV. Some others mentioned information from their village or tract leader or from family/friends.
- The type of information received was mainly about the impact of the hazard, with less volunteers receiving information about where, when or what to do.
- Regarding preparedness, although a long list of possible things to do was offered as choices for the volunteers to answer, the majority could only suggest less than three measures to take. Strengthening houses was the response given by the highest percentage – but still less than 50% of volunteers mentioned this as a possible measure of preparedness for cyclones/strong storms.

III.4 Vulnerability, Capacity & Inclusiveness

As the majority of volunteers identified cyclones/strong storms as the main hazard in their community, this section analyzes vulnerability, capacity & inclusiveness in relation to this hazard.

Most affected persons

The majority of volunteers identified older persons, children and persons with disabilities as the most vulnerable persons (Table III.4.1). Only about 50% overall mentioned women. Very few mentioned poor households or families living in remote areas. The percentage of volunteers who identified the first four groups was relatively higher in the exit area of Labutta than other areas.

TABLE III.4.1 – Most affected persons (# & % of responses)

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By intervention			
Intervention level	Exit	Consol	Consol	New	New	New		Exit	Consol	New	Total
Older persons	38	21	18	30	7	2	116	38	39	39	116
Children	38	16	15	19	5	3	96	38	31	27	96
Persons with disabilities	33	19	17	22	3	2	96	33	36	27	96
Women	34	10	13	11			68	34	23	11	68
Families in remote areas	3	3	1	1	3		11	3	4	4	11
Poor HHs	3		2	1	4		10	3	2	5	10
Multiple responses	**149**	**69**	**66**	**84**	**22**	**7**	**397**	**149**	**135**	**113**	**397**

% of all respondents who identified cyclones/strong storms as main hazard

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By intervention			
Intervention level	Exit	Consol	Consol	New	New	New		Exit	Consol	New	Total
Older persons	95%	88%	90%	88%	70%	50%	88%	95%	89%	81%	88%
Children	95%	67%	75%	56%	50%	75%	73%	95%	70%	56%	73%
Persons with disabilities	83%	79%	85%	65%	30%	50%	73%	83%	82%	56%	73%
Women	85%	42%	65%	32%			52%	85%	52%	23%	52%
Families in remote areas	8%	13%	5%	3%	30%		8%	8%	9%	8%	8%
Poor HHs	8%		10%	3%	40%		8%	8%	5%	10%	8%

A comparison of the percentage responses by gender shows that a slightly higher percentage of female volunteers identified each of the four main groups of vulnerable persons than the male volunteers (Chart III.4.1). Comparison by age groups of these four categories shows an interesting result that a lower percentage of older respondents identified older persons as being most affected than other age groups (Chart III.4.2).

CHART III.4.1 – Most affected persons by gender (% of volunteers)

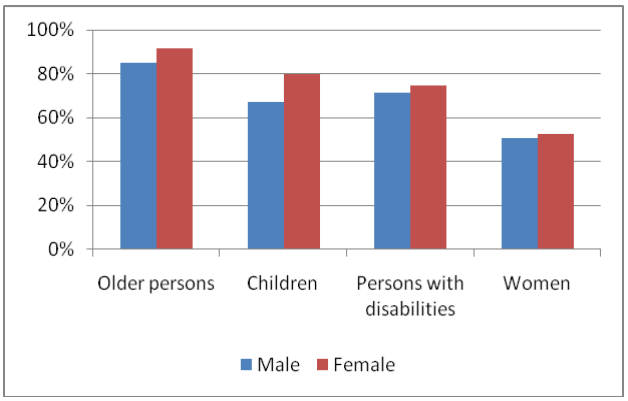
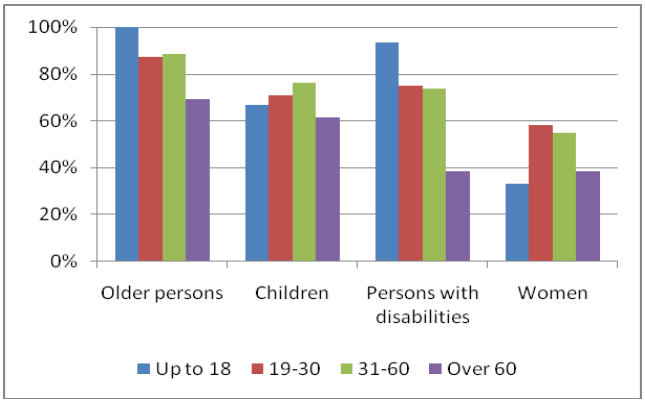


CHART III.4.2 – Most affected persons by age groups (% of volunteers)



As the numbers of responses to poor households and families in remote areas were too low to draw any general conclusions, the sections below concentrate analysis of the understanding of vulnerability among volunteers on the four main categories they identified – older persons, children, persons with disabilities and women.

Older persons

Among those volunteers who identified older persons as being a group most affected by cyclones/storms, almost all of them (94%) felt the main reason was they were could not easily evacuate (Table III.4.2). This response was relatively uniform across gender, age and education level of respondents.

TABLE III.4.2 – Why older persons most affected (% of responses)

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Not able to evacuate	90%	91%	95%	100%	100%	100%	94%
Not receive warning	5%	5%	5%				3%
Not resilient to extreme weather	2%	5%					2%
No place to go	2%						1%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Ways of reducing this impact offered by the volunteers naturally reflected the above reason, with the highest percentage saying family, neighbors or youth should help them to evacuate (83%). Just over 10% of respondents mentioned the importance of DRR committees making sure that they were specifically warned.

TABLE III.4.3 – How to reduce impact on older persons (# & % of responses)

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know				1	1		2
DRR comm send specific messages	3	3	5	1	1	2	15
Family/neighbors help to evacuate	34	20	16	27	6	2	105
Youth should help them (evacuate)	8	1		1			10
Misc. other responses	4			2	1		7
Multiple responses	**49**	**24**	**21**	**32**	**9**	**4**	**139**

% of responses

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know				3%	11%		1%
DRR comm send specific messages	6%	13%	24%	3%	11%	50%	11%
Family/neighbors help to evacuate	69%	83%	76%	84%	67%	50%	76%
Youth should help them (evacuate)	16%	4%		3%			7%
Misc. other responses	8%			6%	11%		5%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Asked whether these suggested ways of reducing impact were already included in the community DRR Action Plans, a very high percentage said that they were (Table III.4.4). The remainder said no or they did not know.

TABLE III.4.4 – % of ways to reduce impact on older persons included in DRR Action Plans

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
DRR comm send specific messages	100%	100%	100%	100%			80%
Family/neighbors help to evacuate	97%	100%	94%	81%	67%		90%
Others	75%	100%		67%			71%

Finally, in relation to older persons, the volunteers were asked how these older persons could be included in the community disaster management. Over 60% said they could be advisors, with almost 50% saying they could be members of committees or task forces. Only 16% said it would be difficult to include them and one person did not know how to include (Table III.4.5)

TABLE III.4.5 – How to include older persons in disaster management

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know				1			1
Difficult to include	7	1	2	7	1		18
Can be member comm/TF	24	14	6	7	1	2	54
Should be advisors	24	14	13	13	6	1	71
Multiple responses	**55**	**29**	**21**	**28**	**8**	**3**	**144**

% of respondents who identified older persons as most affected group

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know				3%			1%
Difficult to include	18%	5%	11%	23%	14%		16%
Can be member comm/TF	63%	67%	33%	23%	14%	100%	47%
Should be advisors	63%	67%	72%	43%	86%	50%	61%

Children

Among those volunteers who identified children as being a group most affected by cyclones/storms, the reason given most frequently was that they cannot evacuate quickly (Table III.4.6). Another large group (30%) felt that low knowledge among children made them more vulnerable. That children do not pay attention to warnings was noted by only 15% of respondents overall but quite high percentages of the volunteers in both Pathein and Sittwe (both about one-third of respondents). These responses were relatively uniform across gender, age and education level of respondents.

TABLE III.4.6 – Why children most affected (% of responses)

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Not pay attention to warning	15%	36%		5%		33%	15%
Cannot evacuate quickly	32%	36%	60%	60%	40%	67%	43%
They have little knowledge	36%	23%	33%	20%	60%		30%
Misc others	17%	5%	7%	15%			12%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Ways of reducing this impact offered by the volunteers naturally reflected the above reasons, with the highest percentage saying family or neighbors should help them to evacuate (83%). The remaining 17% of respondents felt that DRR committees should assign specific persons to ensure that children received the warnings.

TABLE III.4.7 – How to reduce impact on children (# & % of responses)

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
DRR assign specific person to give warning	7	5	2	1	2		17
Family/neighbors help to evacuate	32	12	14	18	2	3	81
Multiple responses	**39**	**17**	**16**	**19**	**4**	**3**	**98**

% of responses

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
DRR assign specific person to give warning	18%	29%	13%	5%	50%		17%
Family/neighbors help to evacuate	82%	71%	88%	95%	50%	100%	83%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Asked whether these suggested ways of reducing impact were already included in the community DRR Action Plans, a very high percentage said that they were already in their plans (Table III.4.8). The remainder said no or they did not know.

TABLE III.4.8 – % of ways to reduce impact on children included in DRR Action Plans

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
DRR assign specific person to give warning	86%	80%	100%	100%	50%		82%
Family/neighbors help to evacuate	97%	75%	86%	67%		67%	81%

Finally, in relation to children, the volunteers were asked how the children could be included in the community disaster management. Almost 70% said they could be members of committees or task forces. Only 19% said it would be difficult to include them and 15% did not have any idea how to include (Table III.4.9)

TABLE III.4.9 – How to include children in disaster management

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know	7		4	2	1		14
Difficult to include	7	2	2	5	2		18
Can be member comm/TF	24	14	9	13	2	3	65
Multiple responses	**38**	**16**	**15**	**20**	**5**	**3**	**97**

% of respondents who identified children as most affected group

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know	18%		27%	11%	20%		15%
Difficult to include	18%	13%	13%	26%	40%		19%
Can be member comm/TF	63%	88%	60%	68%	40%	100%	68%

Persons with disabilities

Among those volunteers who identified persons with disabilities as being a group most affected by cyclones/storms, the reason given by almost all respondents (96%) was that they have difficulty to evacuate as cannot go by themselves (Table III.4.10). Only a few respondents mentioned that they may not receive a warning.

TABLE III.4.10 – Why persons with disabilities most affected (% of responses)

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
May not receive warning	3%	9%	5%				4%
Difficulto to evacuate	79%	78%	85%	95%	100%	100%	84%
Can't go by theirselves	18%	13%	10%	5%			12%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Ways of reducing the impact on disabled persons was similar to responses to other vulnerable groups above, with respondents saying that family and neighbors should help them when they need to evacuate or move them to a safe place. Sending specific messages was noted by a few volunteers and a few others suggested the need to have data about disabled persons.

TABLE III.4.11 – How to reduce impact on persons with disabilities (# & % of responses)

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know					1		1
DRR comm send specific messages	6	4	4			1	15
Family/neighbors help to evacuate	25	13	16	20	2	1	77
Move them to safe place	6	1					7
Collect data about them		2		2	1		5
Multiple responses	**37**	**20**	**20**	**22**	**4**	**2**	**105**

Asked whether these suggested ways of reducing impact were already included in the community DRR Action Plans, a very high percentage said that they were already in their plans for assistance with evacuation (Table III.4.12). But percentages were lower for ensuring DRR committees send specific message to these persons with disabilities. For plans not included, some respondents said they were not in the plans but others did not know (so they could be).

TABLE III.4.12 – % of ways to reduce impact on persons with disabilities in Action Plans

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
DRR comm send specific messages	50%	50%	75%				53%
Family/neighbors help to evacuate	96%	77%	94%	70%			82%
Other suggestions (see Table III.4.11)	100%	100%		50%			83%

Finally, in relation to persons with disabilities, the volunteers were asked how these persons could be included in the community disaster management. Almost 50% said they could be members of committees or task forces. Another 36% suggested they could be advisors. Quite a high percentage (27%) said it would be difficult to include them (Table III.4.13).

TABLE III.4.13 – How to include persons with disabilities in disaster management

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Difficult to include	12	5	3	6			26
Can be member comm/TF	17	10	6	9	1	2	45
Should be advisors	16	2	9	5	2	1	35
Help each other/distribute information	2	2		1			5
Multiple responses	**47**	**19**	**18**	**21**	**3**	**3**	**111**

% of respondents who identified person with disabilities as most affected group

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Difficult to include	36%	26%	18%	27%			27%
Can be member comm/TF	52%	53%	35%	41%	33%	100%	47%
Should be advisors	48%	11%	53%	23%	67%	50%	36%
Help each other/distribute information	6%	11%		5%			5%

Women

Among those volunteers who identified women as being a group most affected by cyclones/storms, the issue of pregnancy was raised by over 40% of respondents (Table III.4.14). The reason mentioned most frequently after that was that women are physically less strong than men (35%). A few other respondents mentioned that they have to take care of children (as well as themselves). A few other minor issues were raised by a few respondents. Note that there are no responses from NgaPuDaw or Sittwe as no volunteers in those townships identified women among the groups most affected (refer Table III.4.1 above).

TABLE III.4.14 – Why women most affected (% of responses)

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Physically less strong than men	30%	46%	36%	45%			35%
Have to take care of children	16%	31%	14%	9%			17%
If pregnant, can't move easily	45%	23%	43%	45%			41%
Can't protect themselves	5%		7%				4%
Their capacity is weak	2%						1%
They can't swim	2%						1%
	100%	**100%**	**100%**	**100%**			**100%**

Ways of reducing the impact on women was similar to responses to other vulnerable groups above, with the majority of respondents saying that family and neighbors should help them when they need to evacuate. Ensuring early warning messages can be understood by all (presumably a reference to the possibility of lower literacy among women) was noted by a number of volunteers, particularly in Labutta.

TABLE III.4.15 – How to reduce impact on women (# & % of responses)

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know			1				1
DRR comm ensure EW can be understood by all	10		3				13
Family/neighbors help to evacuate	27	7	12	9			55
Misc. other ways	3	2	1	2			8
Multiple responses	**40**	**9**	**17**	**11**			**77**

% of responses

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know			6%				1%
DRR comm ensure EW can be understood by all	25%		18%				17%
Family/neighbors help to evacuate	68%	78%	71%	82%			71%
Misc. other ways	8%	22%	6%	18%			10%
	100%	**100%**	**100%**	**100%**			**100%**

These suggested ways of reducing impact were already included in the community DRR Action Plans for the most of the suggestions, particularly in the exit and consolidation areas (Table III.4.16). But percentages were lower in the new areas of Pyapon.

TABLE III.4.16 – % of ways to reduce impact on women in Action Plans

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
DRR comm ensure EW can be understood by all	100%		100%				100%
Family/neighbors help to evacuate	100%	71%	92%	56%			87%
Others	100%	100%		50%			75%

Suggestions for including women in disaster management showed that 62% of volunteers felt they could be included in committees or task forces and 38% of respondents felt they can give important input (Table III.4.17). The percentages of volunteers who said it is difficult to include women (16%) is quite high considering most of these responses came from volunteers in exit villages. Quite a high percentage (18%) in the new villages in Pyapon do not have any idea how women can be included.

TABLE III.4.17 – How to include women in disaster management

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know		1	1	2			4
Difficult to include	8		2	1			11
Can be member comm/TF	22	8	7	5			42
Women can give important input	15	4	4	3			26
Multiple responses	**45**	**13**	**14**	**11**			**83**

% of respondents who identified women as most affected group

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know		10%	8%	18%			6%
Difficult to include	24%		15%	9%			16%
Can be member comm/TF	65%	80%	54%	45%			62%
Women can give important input	44%	40%	31%	27%			38%

Added value of various vulnerable groups

To further explore attitudes towards certain vulnerable groups, volunteers were asked separate questions on the added value of including women, older people, children and persons with disabilities on disaster management committees. The responses given are presented in Tables III.4.18 to 21 below.

TABLE III.4.18 – Added value of women on DM committees

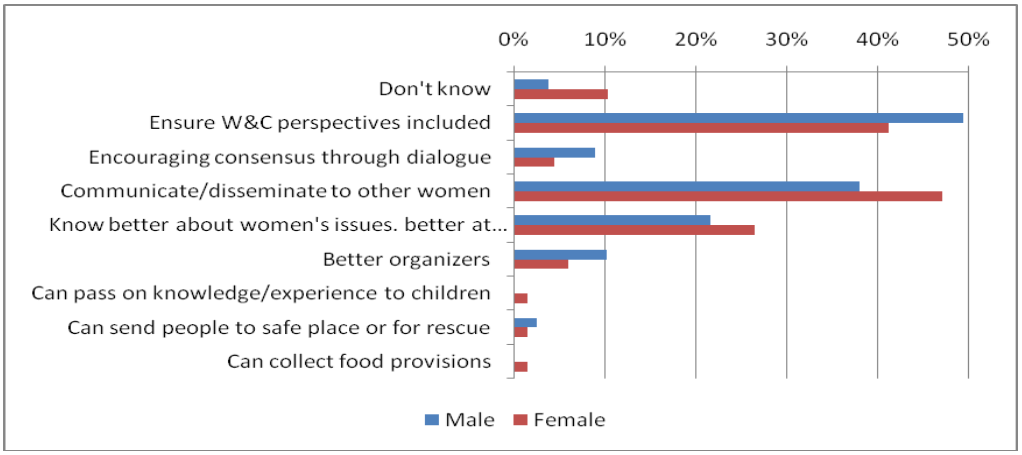
Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know	2		2	6			10
Ensure W&C perspectives included	22	16	12	8	6	3	67
Encouraging consensus through dialogue	4	2	1			3	10
Communicate/disseminate to other women	15	10	13	18	5	1	62
Know better about women's issues. better at caring & documentation	14	6	5	8	2		35
Better organizers	6	1	2	1	2		12
Can pass on knowledge/experience to children	1						1
Can send people to safe place or for rescue	1		2				3
Can collect food provisions	1						1
Multiple responses	**66**	**35**	**37**	**41**	**15**	**7**	**201**

% of all respondents

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know	5%		7%	16%			7%
Ensure W&C perspectives included	54%	67%	44%	22%	50%	50%	46%
Encouraging consensus through dialogue	10%	8%	4%			50%	7%
Communicate/disseminate to other women	37%	42%	48%	49%	42%	17%	42%
Know better about women's issues. better at caring & documentation	34%	25%	19%	22%	17%		24%
Better organizers	15%	4%	7%	3%	17%		8%
Can pass on knowledge/experience to children	2%						1%
Can send people to safe place or for rescue	2%		7%				2%
Can collect food provisions	2%						1%

The two areas mentioned most frequently by the volunteers as added value of women were that they can ensure the inclusion of women's and children's perspectives and that they can communicate and disseminate better to other women. Comparing the responses between male and female volunteers shows that a higher percentage of male volunteers consider the added value of ensuring women's and children's perspectives but a higher percentage of female volunteers noted the added value of communication. A higher percentage of male volunteers acknowledge the value of women in encouraging consensus and as better organizers.

CHART III.4.3 – Added value of women on DM committees by gender (% of responses)



A high percentage of volunteers appreciated **older people's** participation on committees for the wisdom and life experiences they can bring (61% of respondents) as well as their historical knowledge (53%). Another reason that was supported by 27% of respondents was the ability of older people to motivate other people. These and other responses are presented in Table III.4.19 below.

TABLE III.4.19 – Added value of older people on DM committees

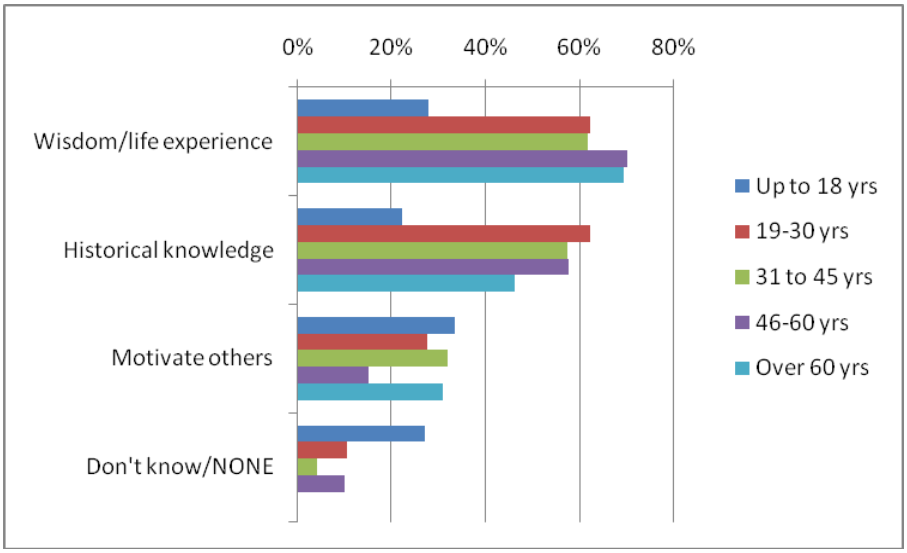
Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know		1	3	4		1	9
NONE			2	1	1	1	5
Motivate others	11	4	11	12	1		39
Resolve disputes		2	1	3			6
Historical knowledge	27	14	12	18	6	1	78
Wisdom/life experience	34	16	12	14	10	3	89
Understand vulnerabilities	1	1				1	3
Multiple responses	**73**	**38**	**41**	**52**	**18**	**7**	**229**

% of all respondents

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know		4%	11%	11%		17%	6%
NONE			7%	3%	8%	17%	3%
Motivate others	27%	17%	41%	32%	8%		27%
Resolve disputes		8%	4%	8%			4%
Historical knowledge	66%	58%	44%	49%	50%	17%	53%
Wisdom/life experience	83%	67%	44%	38%	83%	50%	61%
Understand vulnerabilities	2%	4%				17%	2%

While there were no significant differences in the percentages of responses given by gender, it is interesting to compare the responses by age groups (Chart III.4.4). A much higher percentage of younger persons don't know what the added value of older persons is or say there is none. There is a progressively higher acknowledgement of the wisdom and life experiences that can be contributed by older people as the age groups rise. But a higher percentage of younger people value the ability of older people to motivate others.

CHART III.4.4 – Added value of older persons on DM committees by age (% of responses)



The most frequent reason given for the value of **children** on disaster management committees was their ability to communicate/disseminate to other children, almost 70% of responses. A number of other reasons were given also but not by any great number of volunteers. About 10% of volunteers either don't know the possible value of children on disaster management committees or say there is no added value. There were no significant variances between the responses by age or gender.

TABLE III.4.20 – Added value of children on DM committees

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know	3		2	4			9
NONE	1	1	1	3			6
Ensure children's perspectives included	4	4	1	2	4	3	18
Communicate/disseminate to other children	32	17	20	21	7	3	100
Fast and active	6	1	4	2	1		14
Can share news/early warning	2	4	4	6	1		17
Can follow instructions	2	1	1	2			6
Misc others	2	2					4
Multiple responses	**52**	**30**	**33**	**40**	**13**	**6**	**174**

% of all respondents

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know	7%		7%	11%			6%
NONE	2%	4%	4%	8%			4%
Ensure children's perspectives included	10%	17%	4%	5%	33%	50%	12%
Communicate/disseminate to other children	78%	71%	74%	57%	58%	50%	68%
Fast and active	15%	4%	15%	5%	8%		10%
Can share news/early warning	5%	17%	15%	16%	8%		12%
Can follow instructions	5%	4%	4%	5%			4%
Misc others	5%	8%					3%

Responses to the added value of **persons with disabilities** on disaster management committees are shown in Table III..21 below.

TABLE III.4.21 – Added value of persons with disabilities on DM committees

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know	4	1	5	8	2		20
NONE	4	7	4	10	2	3	30
Understand issues of disbility	8	7	7	10	5	2	39
Ensure plans incorporate appropriate measures for disabled	16	9	10	6		1	42
Give advice/ share the experience	17	2	3	6	3		31
Misc. other reasons	1	1					2
Multiple responses	**50**	**27**	**29**	**40**	**12**	**6**	**164**

% of all respondents

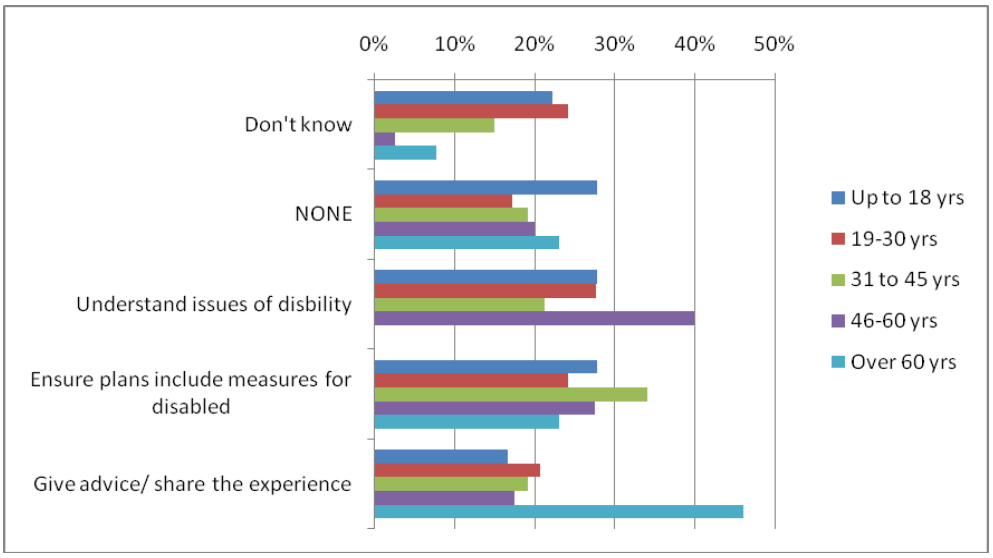
Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know	10%	4%	19%	22%	17%		14%
NONE	10%	29%	15%	27%	17%	50%	20%
Understand issues of disbility	20%	29%	26%	27%	42%	33%	27%
Ensure plans incorporate appropriate measures for disabled	39%	38%	37%	16%		17%	29%
Give advice/ share the experience	41%	8%	11%	16%	25%		21%
Misc. other reasons	2%	4%					1%

The table above shows that value of persons with disabilities is relatively evenly spread among three reasons – because they understand issues of disability; because they can ensure plans incorporate

appropriate measures for the disabled; and for the advice and experiences they can share. However a high percentage of volunteers (20%) feel there is no added value of including persons with disability on committees and 14% of volunteers do not know what the added value of them could be.

While there were no significant differences to highlight between the responses of male and female volunteers, a comparison of the responses per age group shows that a much higher percentage of the younger age groups don't know what added value persons with disability can bring or say there is no added value compared to the older age groups (Chart III.4.5). Volunteers over 60 years old particularly noted the value of advice and sharing of experiences but none of them noted the understanding about disability as an added value.

CHART III.4.5 – Added value of children on DM committees by age (% of responses)



Summary of key points on Vulnerability, Capacity and Inclusiveness

- A very high percentage of all volunteers (between 70-90%) identified older persons, children and persons with disabilities as those most affected by cyclones/strong storms. However women were mentioned by only about 50% of volunteers. Very few mentioned poor households or families in remote areas.
- The main reasons why volunteers felt these groups were most affected was mainly linked to issues of evacuation (older people and disabled cannot move easily on their own; children need assistance; and women are busy with children with gives them additional burden).
- The main suggestion from most volunteers to reduce this impact was for family and neighbors to help. Only a few mentioned the involvement of DRR committees (such as ensuring specific warnings and information reach these vulnerable groups). Most of the suggestions of the volunteers are already in their DRR Action Plans especially related to support from family and neighbors but less so for suggestions involving DRR committees – and more plans are included in the exit and consolidation villages than the new ones.
- How these groups can be included in community disaster management evoked slightly different responses in relation to each of the groups but in general between 50-60% of volunteers believed they could have a role to play as members of committees/task forces or as advisors.
- The percentage of volunteers who said it would be difficult to include was 16% in respect of older persons, 19% for children, 18% for women, and a high of 27% in relation to persons with disabilities.
- An analysis of these responses for "difficult to include" shows that only one person gave that response for all four vulnerable groups and only 8 persons gave for three. Thirteen volunteers gave for two and 19 for only one group each. So a total of 41 persons (31% of those who identified cyclones/storms as their main hazard) thought it would be difficult to include at least one of these groups in community disaster management.

- Regarding added value of these groups on disaster management committees, a high percentage of volunteers could name some key areas of added value.
- The main areas of added value of having women were that they could ensure the inclusion of women's and children's issues and their ability to communicate/disseminate information to other women.
- For older people, their participation can contribute added value through the wisdom and life experiences they bring plus their historical knowledge.
- The main added value noted for children was their ability to communicate and disseminate to other children.
- The added value noted for persons with disabilities was a mixture of their understanding of disability, that they could ensure plans included appropriate measures for the disabled and sharing advice and experiences.
- However, in spite of the added value noted by a high percentage of volunteers, still some of them either don't know what the added value could be or think there is no added value of including these groups on disaster management committees.
- In particular, 20% of respondents did not know what added value persons with disabilities could bring and another 14% did not see any added value. For children, 10% either did not know or did not see any added value.

III.5 Risk Assessment, Planning & Sustainability

Risk assessment

The MCCR partners have used different terminologies to describe their risk assessment processes including: "Participatory Disaster Risk Assessment", "Hazard Vulnerability & Capacity Assessment" or "Participatory Vulnerability Analysis". Although it is planned to agree on a common term for this during the course of this Action Plan, the three terms were included for this KAP survey to ensure those being interviewed could identify with the questions being asked.

Using the term (from the three mentioned above) most commonly used to date in the village being surveyed, volunteers were asked what the process meant to them. The majority of volunteers (109 persons; 74%) could not explain at all (Table III.5.1). Of the remaining 38 volunteers who did give answers (and some gave more than one), the answers were coded into four groups, as shown in the table below.

TABLE III.5.1 – Meaning of "Risk Assessment" process

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know	24	11	23	34	12	5	109
1. Draw map/ Separate interview groups	5	1	3	1			10
2. Assess vulnerable people/ make simulations/ Form committee/ Define the safety place	9	12	1	1		1	24
3. Give trainings about Red-cross training, Gender training, meeting, Disaster risk reduction training/ capacity building training/ practical training	7	6		1		1	15
4. Discuss about the vulnerable people during the hazards	2	4					6
Multiple responses	**47**	**34**	**27**	**37**	**12**	**7**	**164**

% of all respondents

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know	59%	46%	85%	92%	100%	83%	74%
1. Draw map/ Separate interview groups	12%	4%	11%	3%			7%
2. Assess vulnerable people/ make simulations/ Form committee/ Define the safety place	22%	50%	4%	3%		17%	16%
3. Give trainings about Red-cross training, Gender training, meeting, Disaster risk reduction training/ capacity building training/ practical training	17%	25%		3%		17%	10%
4. Discuss about the vulnerable people during the hazards	5%	17%					4%

The four responses given above can be assessed as followed:

1. These can be considered some tools to be used during the risk assessment process but the answer is not very comprehensive
2. Assessing vulnerable people and defining safety places are key elements in the risk assessment but making simulations and forming committees are actions to follow the assessment process
3. This answer is all about trainings. While these should be identified as needs during the risk assessment process (and included in the DRR plans), the training is implementation of the plan rather than a component of the risk assessment process
4. This is correct but only one element of the risk assessment process.

Although the answers above suggested relatively low understanding of the risk assessment process, when asked about their confidence level to conduct such a process, 75% of volunteers said they would be confident (and some even very confident) to conduct (Table III.5.2). Interestingly, there were some volunteers in the new areas who claimed to be very confident while some in the exit or consolidation areas who are not confident.

TABLE III.5.2 – Confidence to conduct "Risk Assessment" process

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By intervention			
Intervention level	Exit	Consol	Consol	New	New	New		Exit	Consol	New	Total
Very confident	8	5	7	3		2	25	8	12	5	25
Confident	20	12	9	9	7	3	60	20	21	19	60
A bit confident	7	6	5	4	2	1	25	7	11	7	25
Not confident	6	1	5	9	3		24	6	6	12	24
Don't know			1	12			13		1	12	13
	41	**24**	**27**	**37**	**12**	**6**	**147**	**41**	**51**	**55**	**147**

% of all respondents

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By intervention			
Intervention level	Exit	Consol	Consol	New	New	New		Exit	Consol	New	Total
Very confident	20%	21%	26%	8%		33%	17%	20%	24%	9%	17%
Confident	49%	50%	33%	24%	58%	50%	41%	49%	41%	35%	41%
A bit confident	17%	25%	19%	11%	17%	17%	17%	17%	22%	13%	17%
Not confident	15%	4%	19%	24%	25%		16%	15%	12%	22%	16%
Don't know			4%	32%			9%		2%	22%	9%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

While analysis of the responses by levels of education did not show any significant trend in favor of those with different levels of education, analysis by gender showed slightly less confidence among female volunteers – 72% compared to males at 77% (and among the 72% who have some confidence, more of them were in the "a bit confident" stage rather than confident or very confident). The comparison of each level of confidence is shown in Chart III.5.1 below. Comparing by age groups shows a higher percentage of the older groups who are very confident compared to the younger age groups (Chart III.5.2).

CHART III.5.1 – Confidence to conduct risk assessment (by gender, % of volunteers)

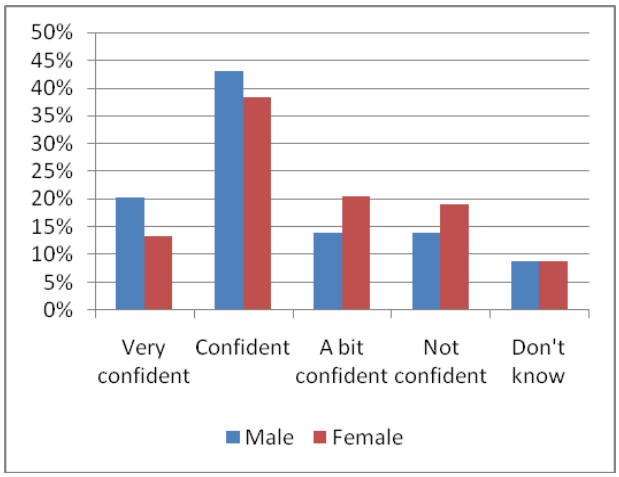
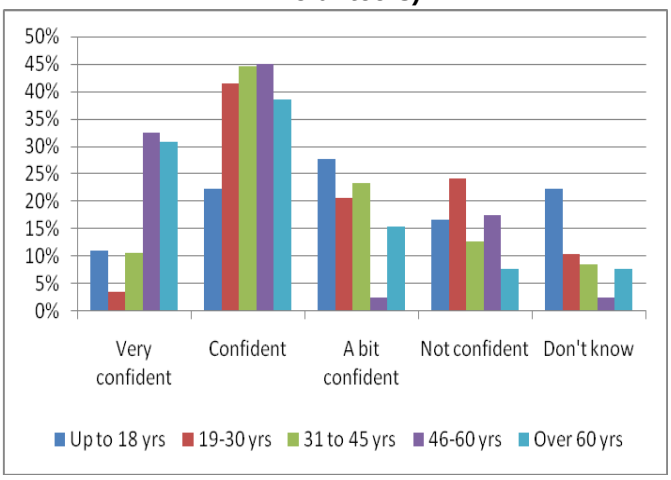


CHART III.5.2 – Confidence to conduct risk assessment (by age groups, % of volunteers)



Almost 80% of volunteers have some confidence to conduct DRR training to other villagers (Table III.5.3).

TABLE III.5.3 – Confidence to conduct DRR training to villagers

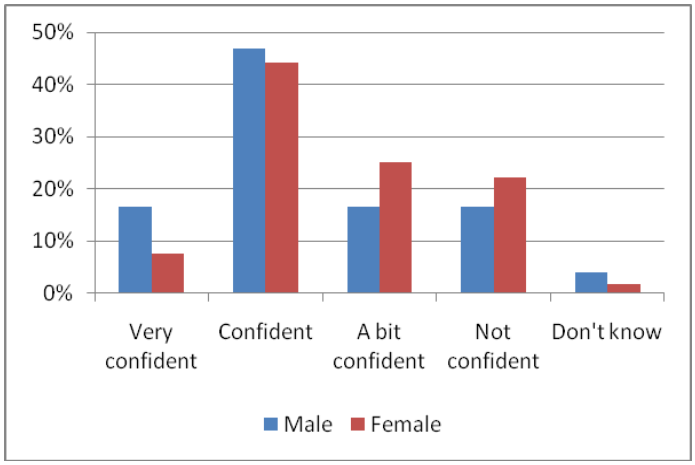
Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Very confident	10%	8%	26%	8%		33%	12%
Confident	54%	50%	33%	35%	67%	50%	46%
A bit confident	22%	38%	19%	14%	17%		20%
Not confident	15%	4%	22%	32%	17%	17%	19%
Don't know				11%			3%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

As for conducing risk assessment, there was also slightly less confidence among female volunteers to conduct DRR training to villagers than male volunteers (Table III.5.4 and Chart III.5.3)..

TABLE III.5.4 – Confidence to conduct DRR training (by gender, # of volunteers)

	By gender	
	Male	Female
Very confident	13	5
Confident	37	30
A bit confident	13	17
Not confident	13	15
Don't know	3	1
	79	68

CHART III.5.3 – Confidence to conduct DRR training (by gender, % of volunteers)



DRR planning

Confidence among the volunteers to include women, older people, people with disabilities and children in community DRR planning varied a little for each of the groups. While most volunteers had some level of confidence to include these groups of people, the percentages who did not have confidence to include children was only 4% and for women 8%. But lack of confidence (or do not know) to include older people was a little higher at 11% and lack of confidence to include the disabled even higher at 17%. Tables III.5.5 to III.5.8 present the responses by number and % of volunteers.

TABLE III.5.5 – Confidence to include women in DRR planning

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Very confident	9	5	12	10	1	3	40
Confident	14	9	5	18	8	2	56
A bit confident	13	10	5	7	3	1	39
Not confident	5		2	1			8
Don't know			3	1			4
	41	24	27	37	12	6	147

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Very confident	22%	21%	44%	27%	8%	50%	27%
Confident	34%	38%	19%	49%	67%	33%	38%
A bit confident	32%	42%	19%	19%	25%	17%	27%
Not confident	12%		7%	3%			5%
Don't know			11%	3%			3%
	100%	100%	100%	100%	100%	100%	100%

There were relatively little differences in the confidence levels by expressed by gender, age of volunteers or their educational level.

TABLE III.5.6 – Confidence to include older people in DRR planning

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Very confident	9	4	10	11	2	1	37
Confident	17	9	6	15	8	3	58
A bit confident	12	8	6	7	2	1	36
Not confident	3	3	3	4		1	14
Don't know			2				2
	41	**24**	**27**	**37**	**12**	**6**	**147**

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Very confident	22%	17%	37%	30%	17%	17%	25%
Confident	41%	38%	22%	41%	67%	50%	39%
A bit confident	29%	33%	22%	19%	17%	17%	24%
Not confident	7%	13%	11%	11%		17%	10%
Don't know			7%				1%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Unlike inclusion of women, more female volunteers were slightly less confident than their male counterparts in the inclusion of older people in DRR planning (Chart III.5.4). Also, a higher percentage of younger volunteers were less confident, although a high percentage were also very confident (Chart III.5.5).

CHART III.5.4 – Confidence to include older people in DRR planning (by gender, % of volunteers)

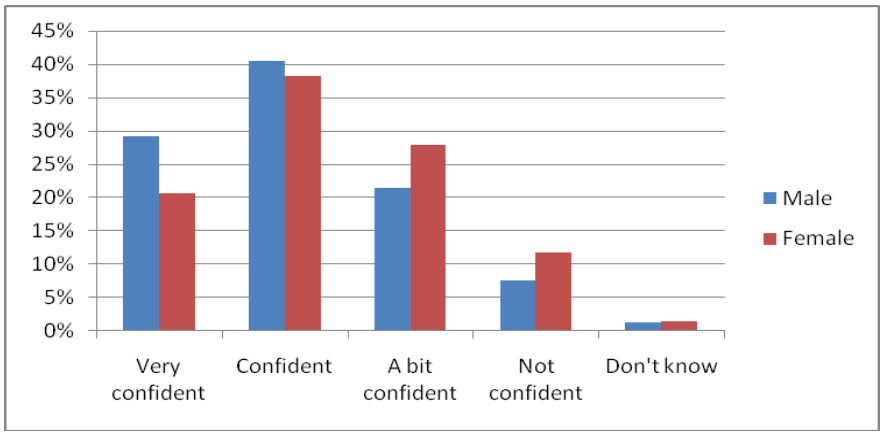


CHART III.5.5 – Confidence to include older people in DRR planning (by age, % of volunteers)

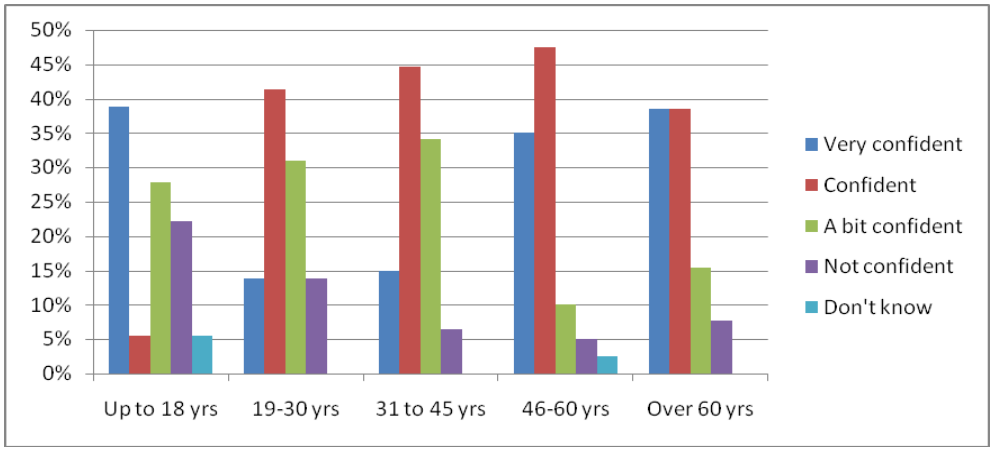


TABLE III.5.7 – Confidence to include people with disabilities in DRR planning

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Very confident	9	3	8	7	2	1	30
Confident	18	8	9	17	3		55
A bit confident	10	8	4	8	5	1	36
Not confident	3	5	5	5	2	4	24
Don't know	1		1				2
	41	**24**	**27**	**37**	**12**	**6**	**147**

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Very confident	22%	13%	30%	19%	17%	17%	20%
Confident	44%	33%	33%	46%	25%		37%
A bit confident	24%	33%	15%	22%	42%	17%	24%
Not confident	7%	21%	19%	14%	17%	67%	16%
Don't know	2%		4%				1%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

As noted earlier, for this group (persons with disabilities), a higher percentage of volunteers expressed lack of confidence in including compared to other groups. This lack of confidence did not differ significantly between male and female volunteers.

TABLE III.5.8 – Confidence to include children in DRR planning

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Very confident	15	5	14	13	4	1	52
Confident	20	12	8	18	6	3	67
A bit confident	4	6	3	6	2	1	22
Not confident	2	1	1			1	5
Don't know			1				1
	41	**24**	**27**	**37**	**12**	**6**	**147**

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Very confident	37%	21%	52%	35%	33%	17%	35%
Confident	49%	50%	30%	49%	50%	50%	46%
A bit confident	10%	25%	11%	16%	17%	17%	15%
Not confident	5%	4%	4%			17%	3%
Don't know			4%				1%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Children were the group where the highest confidence levels were expressed by volunteers for inclusion in DRR planning. Confidence was relatively equally high across genders, age groups and education levels of volunteers.

Just over 60% of the volunteers responded that their village had a DRR plan. Quite a high number (23 volunteers; 16%) did not know if the village had or not.

TABLE III.5.9 – Village has DRR plan (# and % of responses)

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By intervention			
Intervention level	Exit	Consol	Consol	New	New	New		Exit	Consol	New	Total
Yes	35	23	17	13		2	90	35	40	15	90
No	1	1	5	14	9	4	34	1	6	27	34
Don't know	5		5	10	3		23	5	5	13	23
	41	**24**	**27**	**37**	**12**	**6**	**147**	**41**	**51**	**55**	**147**
As % of all responses											
Yes	85%	96%	63%	35%		33%	61%	85%	78%	27%	61%
No	2%	4%	19%	38%	75%	67%	23%	2%	12%	49%	23%
Don't know	12%		19%	27%	25%		16%	12%	10%	24%	16%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

The 90 volunteers who responded positively to the previous question were asked if their community had been able to implement their DRR Action Plan – or at least some part of their plan. A very high percentage of them (79%) said they had (Table III.5.10).

TABLE III.5.10 – Village has been able to implement (at least part of) the DRR plan (# and % of responses)

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By intervention			
Intervention level	Exit	Consol	Consol	New	New	New		Exit	Consol	New	Total
Yes	31	17	16	5		2	71	31	33	7	71
No	1	2		7			10	1	2	7	10
Don't know	3	4	1	1			9	3	5	1	9
	35	**23**	**17**	**13**		**2**	**90**	**35**	**40**	**15**	**90**
As % of all responses											
Yes	89%	74%	94%	38%		100%	79%	89%	83%	47%	79%
No	3%	9%		54%			11%	3%	5%	47%	11%
Don't know	9%	17%	6%	8%			10%	9%	13%	7%	10%
	100%	**100%**	**100%**	**100%**		**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Follow up to this question, volunteers were asked to name the type of activities that had been implemented to date. The responses (shown in Table III.5.11) below show that a wide variety of activities have been carried out, with small-scale structural mitigation being mentioned most frequently.

TABLE III.5.11 – Activities from DRR Action Plan that have been implemented

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know	2			2			4
Set up EWS(s)	6	6	8			1	21
Disseminate on HH preparedness	3	6	8	2		1	20
Small scale structural mitigation	20	9	8	2			39
Non-structural mitigation	15	4	1				20
Simulations/drills	7	4	3				14
Establish safe areas	5	3	1			1	10
Meetings. trainings & infor dissem		7	1				8
Organize committees	1						1
Fundraising		1					1
Multiple responses	**59**	**40**	**30**	**6**		**3**	**138**

% of all responses

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know	5%			5%			3%
Set up EWS(s)	15%	25%	30%			17%	14%
Disseminate on HH preparedness	7%	25%	30%	5%		17%	14%
Small scale structural mitigation	49%	38%	30%	5%			27%
Non-structural mitigation	37%	17%	4%				14%
Simulations/drills	17%	17%	11%				10%
Establish safe areas	12%	13%	4%			17%	7%
Meetings. trainings & infor dissem		29%	4%				5%
Organize committees	2%						1%
Fundraising		4%					1%

When asked about activities in their plans that could not be implemented, the majority of volunteers did not know. But among those who did know, structural works were mentioned most often as the activity that could not be implemented (Table III.5.12).

TABLE III.5.12 – Activities from DRR Action Plan that could not be implemented

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
DONT KNOW	13	9	6	4			32
Structural works	16	2	12	1			31
Warning systems	2	3				1	6
Safe area	1						1
Organizing & reporting		3	3				6
Food supplies	2						2
Helping the poor	1					1	2
Plant trees to resist wind	1						1
Multiple responses	**36**	**17**	**21**	**5**		**2**	**81**

% of all responses

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
DONT KNOW	36%	53%	29%	80%			40%
Structural works	44%	12%	57%	20%			38%
Warning systems	6%	18%				50%	7%
Safe area	3%						1%
Organizing & reporting		18%	14%				7%
Food supplies	6%						2%
Helping the poor	3%					50%	2%
Plant trees to resist wind	3%						1%
	100%	**100%**	**100%**	**100%**		**100%**	**100%**

A large percentage of the respondents (42%) did not know what the main obstacles were that prevented the above plans from being implemented (Table III.5.13). But of those who did know, the main reasons were a mixture of resource and organizational issues.

TABLE III.5.13 – Obstacles that prevented plans from being implemented

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know	16	7	6	3		2	34
Difficulty in financial, human resource, transportation	8	6	7	1			22
Difficulty in organizing villagers, villagers can't give time	12	5	1	1			19
Misc. other reasons	1	3	2				6
Multiple responses	**37**	**21**	**16**	**5**		**2**	**81**

% of all responses

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know	43%	33%	38%	60%		100%	42%
Difficulty in financial, human resource, transportation	22%	29%	44%	20%			27%
Difficulty in organizing villagers, villagers can't give time	32%	24%	6%	20%			23%
Misc. other reasons	3%	14%	13%				7%
Multiple responses	**100%**	**100%**	**100%**	**100%**		**100%**	**100%**

A final issue asked of the respondents during this section was the role they felt they should play if and when a disaster did occur. While overall only 12% did not know what role they should play, a large percentage of respondents in the new areas (particularly in NgaPuDaw; 42%) did not know. Of those who could answer, the actions in order of number of responses were dissemination of warning information, conducting search & rescue, evacuation and provision of first aid. A few people mentioned coordination with government. The responses are shown in Table III.5.14 below.

TABLE III.5.14 – Role volunteers should play if and when a disaster occurs

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know	2	1	3	6	5		17
Disseminate warning information	29	22	19	17	3	3	93
Conduct search and rescue	24	16	12	19	4	2	77
Evacuate the community	15	12	9	3	1	4	44
Provide first aid	19	13	12	8	1	2	55
Coordinate with government	5		2				7
Multiple responses	**94**	**64**	**57**	**53**	**14**	**11**	**293**

% of all respondents

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know	5%	4%	11%	16%	42%		12%
Disseminate warning information	71%	92%	70%	46%	25%	50%	63%
Conduct search and rescue	59%	67%	44%	51%	33%	33%	52%
Evacuate the community	37%	50%	33%	8%	8%	67%	30%
Provide first aid	46%	54%	44%	22%	8%	33%	37%
Coordinate with government	12%		7%				5%

The responses given above can be considered accurate roles to play with the exception of dissemination of warning. It would be expected that this should have been done prior to the onset of the disaster rather than during as the question was posed.

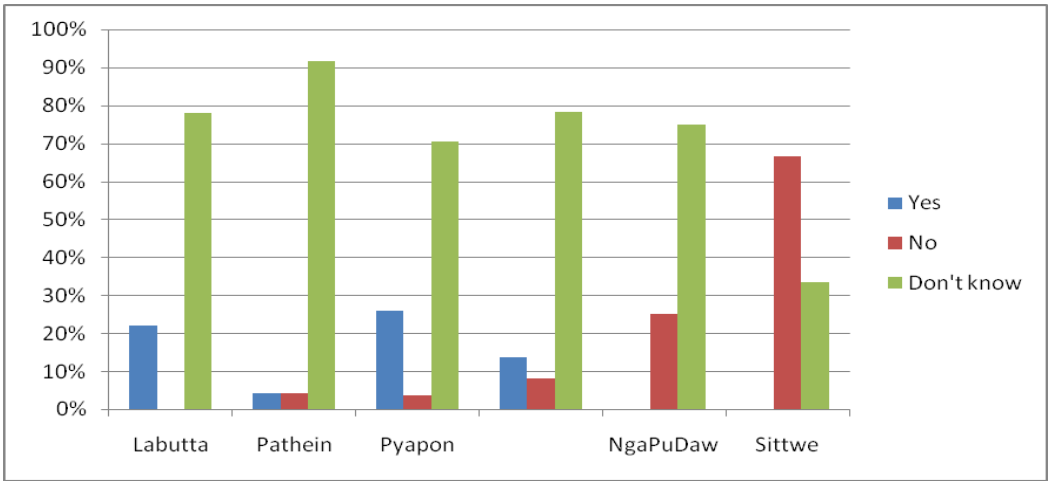
Summary of key points on Risk Assessment, Planning & Sustainability

- Although the majority of volunteers (74%) could not explain the meaning of the risk assessment process, and the meanings that were given by the others were either not accurate or comprehensive, 75% of the volunteers said they would be confident to conduct risk assessment processes in their communities. There was slightly lower confidence level among female volunteers and among the younger age groups.
- Almost 80% of volunteers said they were confident to conduct DRR training to villagers, although again a slightly lower confidence level among female volunteers. Confidence to include vulnerable groups in DRR planning was generally quite high (approximately 80% overall). But a higher percentage of volunteers (17%) were less confident with the inclusion of persons with disabilities. Inclusion of children had the highest confidence levels.
- 61% of volunteers reported that their village had a DRR Action Plan. Among these, almost 80% reported that at least some parts of the plan had been implemented. Many different activities were done but the highest responses related to small-scale structural mitigation works. For activities not implemented, 40% did not know what had not been done. Of those who did know, the majority mentioned structural works as not having been implemented. Regarding why these activities were not implemented, 42% did not know. Among the others the responses were a mixture of lack of resources and problems with community organizing.
- The majority of volunteers could name at least some things they should during a disaster but 12% overall did not know what they should do. Within this 12% was a high of 42% of respondents in the new villages of NgaPuDaw who do not yet know what they should do. Generally the responses for what they should do during a disaster were accurate but a little confusion among some volunteer who mentioned warnings – which should be an activity before, rather than during a disaster.

III.6 Institutional Arrangements

Only 22 volunteers (15%) said they knew how the Disaster Management structure in Myanmar is organized. The percentage was slightly higher in Pyapon and Labutta than other areas (Chart III.6.1).

CHART III.6.1 – Knowledge of DM structure in Myanmar



However, when those few who said they knew were asked to name the different levels, no relevant information was given. Thus it can be concluded that none of the volunteer respondents are currently clear about the DM structure in Myanmar.

A slightly higher percentage of respondents (31%; 45 persons) said they have heard about the DM Law. The highest percentage of those who have heard are in Labutta (Table III.6.1).

TABLE III.6.1 – Heard about the DM Law

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Yes	17	9	7	9	2	1	45
No	4	4	1	5	2	2	18
Don't know	20	11	19	23	8	3	84
	41	**24**	**27**	**37**	**12**	**6**	**147**
% of respondents							
Yes	41%	38%	26%	24%	17%	17%	31%
No	10%	17%	4%	14%	17%	33%	12%
Don't know	49%	46%	70%	62%	67%	50%	57%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Volunteers were then asked whether their village tract or township had a DM committee to which 63% of volunteers responded positively (Table III.6.2).

TABLE III.6.2 – Village Tract or Township has DM committee

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Yes	30	20	17	20	4	2	93
No	2	3	6	3	7	3	24
Don't know	9	1	4	14	1	1	30
	41	**24**	**27**	**37**	**12**	**6**	**147**
% of responses							
Yes	73%	83%	63%	54%	33%	33%	63%
No	5%	13%	22%	8%	58%	50%	16%
Don't know	22%	4%	15%	38%	8%	17%	20%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

The follow up question as to whether the village DRR plan had been shared with this tract or township DM committee should have only been asked of the 93 respondents who answered positively to the previous question but an error in the questionnaire that only put "skip" to the "don't know" response instead of to both "no" and "don't know", meant that the question was posed to 117 volunteers. Therefore in order to understand the number of plans that have been shared, the "no" responses from the previous question have been omitted from the responses to this question so Table III.6.3 below shows only the responses from those who answered "yes".

TABLE III.6.3 – Village DRR plans have been shared with Tract or Township DM committee

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Yes	24	15	13	13	2	1	68
No	1	3	4	2			10
Don't know	5	2		5	3		15
	30	**20**	**17**	**20**	**5**	**1**	**93**
% of responses							
Yes	80%	75%	76%	65%	40%	100%	73%
No	3%	15%	24%	10%			11%
Don't know	17%	10%		25%	60%		16%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

The table above shows that a very high percentage (73%) of village DRR plans have been shared with their village tract or township DM committees (where they exist).

The question regarding relationship between village DRR committees and village tract/township was also posed to both "yes" and "no" respondents so again the responses below have been adjusted to show a more accurate assessment of the quality of relationship.

TABLE III.6.4 – Quality of relationship with Village Tract or Township

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Excellent	2	2	6	1	1		12
Good	19	9	9	15	1	2	55
So-so	3	8	1	2	2		16
Poor	3	1					4
Don't know	3		1	2			6
Multiple responses	**30**	**20**	**17**	**20**	**4**	**2**	**93**
% of all respondents who have relations with village tract/township							
Excellent	7%	10%	35%	5%	25%		13%
Good	63%	45%	53%	75%	25%	100%	59%
So-so	10%	40%	6%	10%	50%		17%
Poor	10%	5%					4%
Don't know	10%		6%	10%			6%
Multiple responses	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

The table above shows that relations are generally good between village DRR committees and the village tract/townships. Only 10% felt the relationship was poor (or they did not know).

Exploring possibilities for integration of DRR plans with overall development plans, volunteers were asked whether the village tract or township had their own development plan. Quite a high percentage of volunteers did not know (35%). Less than 50% of volunteers could say that such development plans existed.

TABLE III.6.5 – Village Tract or Township has development plan

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Yes	20	13	16	18	1	1	69
No	5	1	2	5	8	5	26
Don't know	16	10	9	14	3		52
	41	**24**	**27**	**37**	**12**	**6**	**147**
% of responses							
Yes	49%	54%	59%	49%	8%	17%	47%
No	12%	4%	7%	14%	67%	83%	18%
Don't know	39%	42%	33%	38%	25%		35%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

A very high percentage (80%) of activities from the village DRR plans have been included in the village tract or township development plans.

TABLE III.6.6 – Tract/Township development plan includes activities of village DRR plan

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Yes	15	9	14	15	1	1	55
No	4	2					6
Don't know	1	2	2	3			8
	20	**13**	**16**	**18**	**1**	**1**	**69**
% of responses							
Yes	75%	69%	88%	83%	100%	100%	80%
No	20%	15%					9%
Don't know	5%	15%	13%	17%			12%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Summary of key points on Institutional Arrangements

- Only 22 volunteers (15%) say they know the DM structure of Myanmar but none of them could name the five levels.
- A higher number (45 volunteers; 31%) have heard of the DM Law. 63% of volunteers say their village tract or township has DM committee.
- 73% of these have shared their village DRR Action Plans with these committees.
- Relationships are generally said to be good between village DRR committees and their village tracts/townships.
- Less than 50% of volunteers knew that their village tract or township had a development plan.
- Of those that knew, a high percentage (80%) of volunteers said that those plans included activities from the village DRR plans.

III.7 Schools

Only 84 of the 147 volunteers responded to the questions about DRR in schools, being the respondents of 12 of the 19 villages surveyed. The number of schools in each of their communities was generally only one but in Labutta some communities had up to four schools (Table III.7.1).

TABLE III.7.1 – Number of schools in volunteer's communities

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
One	15	10	15	19	12	6	77
Two	1						1
Three	1						1
Four	5						5
	22	**10**	**15**	**19**	**12**	**6**	**84**

Almost 50% of the volunteers say the schools have DRR committees, but there are less in Pathein, NgaPuDaw and Sittwe than in Labutta or Pyapon (Table III.7.2).

TABLE III.7.2 – Number of schools that have DRR committees

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
All	11	1	10	11	2	1	36
Some	4						4
None	7	9	5	8	10	5	44
	22	**10**	**15**	**19**	**12**	**6**	**84**
% of schools							
All	50%	10%	67%	58%	17%	17%	43%
Some	18%						5%
None	32%	90%	33%	42%	83%	83%	52%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

The volunteers considered there was good cooperation between the VDMCs, task forces and the school DRR committees for almost half of the schools (Table III.7.3). The others either felt there was not good cooperation (38%) or they did not know (15%). Cooperation was highest among the villages at exit and consolidation stage than the newer intervention villages.

TABLE III.7.3 – Cooperation between school DRR committees and VDMCs/Task forces

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Yes	9	1	5	4			19
No	4		3	6	2		15
Don't know	2		2	1		1	6
	15	**1**	**10**	**11**	**2**	**1**	**40**
% of schools							
Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Yes	60%	100%	50%	36%			48%
No	27%		30%	55%	100%		38%
Don't know	13%		20%	9%		100%	15%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

The 19 volunteers who noted good cooperation were asked to give some examples of the types of cooperation. Some gave more than one example. Of the total of 26 responses, there was no one response that dominated; the types of cooperation were a mixture of cooperation for school related activities and general village DRR activities. All responses are listed in Table III.7.4 below.

TABLE III.7.4 – Examples of cooperation between school DRR committees

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know	1			1			2
Cooperation in helping the people with financial difficulty	4	1					5
Participation in meetings and consulting about the tasks	2		1				3
Management team give instruction and sharing information	1						1
Prepare for cooperation during disaster/ Rescue/ Prevention	1		1				2
Supporting with nutritious food	1						1
Make village roads, repair the monasteries and schools/ Preventing by making fences	1		1	2			4
Conducting simulation and drills	1						1
Cooperation with Village Development Management Committee	1						1
Conducting social welfare/ look after for the older ages	1		1				2
Help in repairing school destruction			1	2			3
Sharing the information about schools and make cooperation			1				1
Multiple responses	**14**	**1**	**6**	**5**			**26**

Asked whether they thought that students know what to do during and after a hazard event, about a third of the volunteers said yes, with the highest percentage of responses from Labutta (Table III.7.6). A large percentage felt that only some students knew or only sort of knew what to do.

TABLE III.7.5 – Students know what to do during and after a disaster

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Yes	13	1	4	3	3	1	25
Some/sort of	7	6	3	5	6	3	30
Don't know	2	3	8	8	3	1	25
	22	**10**	**15**	**16**	**12**	**5**	**80**
% of all respondents							
Yes	59%	10%	27%	19%	25%	20%	31%
Some/sort of	32%	60%	20%	31%	50%	60%	38%
Don't know	9%	30%	53%	50%	25%	20%	31%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

According to the volunteers, about 50% of the schools have an evacuation plan, the highest percentages being those in Labutta and the consolidation villages of Pyapon.

TABLE III.7.6 – Schools have evacuation plan

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Yes	17	3	9	4	2	3	38
No	4	7	5	12	9	3	40
Don't know	1		1				2
	22	**10**	**15**	**16**	**11**	**6**	**80**
% of responses							
Yes	77%	30%	60%	25%	18%	50%	48%
No	18%	70%	33%	75%	82%	50%	50%
Don't know	5%		7%				3%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Not many of the schools have conducted emergency simulations and evacuation drills in their schools, with only 16% of volunteers saying such activities have been done. As with evacuation plans above, the highest percentages were from Labutta and the consolidation villages of Pyapon (although these percentages are also quite low, less than 30%).

TABLE III.7.7 – Schools conduct emergency simulations and evacuation drills

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Yes	6		4	1	2		13
No	14	8	9	13	10	6	60
Don't know	2	1	2	2			7
	22	**9**	**15**	**16**	**12**	**6**	**80**
% of responses							
Yes	27%		27%	6%	17%		16%
No	64%	89%	60%	81%	83%	100%	75%
Don't know	9%	11%	13%	13%			9%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Almost 30% of the volunteers say that their village has a backup plan to avoid disruption to school operations in the event of a hazard occurring during the school calendar, with Labutta and the consolidation villages of Pyapon again receiving higher positive responses.

TABLE III.7.8 – Village has backup plan to avoid disruption to school operations

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Yes	9	3	6	3	1	1	23
No	12	7	7	13	11	4	54
Don't know	1		2			1	4
	22	**10**	**15**	**16**	**12**	**6**	**81**
% of responses							
Yes	41%	30%	40%	19%	8%	17%	28%
No	55%	70%	47%	81%	92%	67%	67%
Don't know	5%		13%			17%	5%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

The volunteers generally had a very positive attitude towards the capacity of girls to be rescue workers if there is disaster in the school, with 86% of them saying yes. The highest percentage of negative answers came from Sittwe (33% saying no).

TABLE III.7.9 – Girls are capable of being rescue workers

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Yes	19	8	14	15	10	4	70
No	3	2	1	1	2	2	11
	22	**10**	**15**	**16**	**12**	**6**	**81**
% of responses							
Yes	86%	80%	93%	94%	83%	67%	86%
No	14%	20%	7%	6%	17%	33%	14%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

The final question posed to the volunteers was whether they felt that students (both boys and girls) could make a contribution towards disaster management and planning in their schools. Positive responses were very high (almost 90% saying yes). But among the negative responses was a surprisingly high of 20% in the consolidation area of Pathein.

TABLE III.7.10 – Students can make contribution to disaster management in schools

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Yes	21	8	13	15	10	5	72
No	1	2	2	1	1	1	8
Don't know					1		1
	22	**10**	**15**	**16**	**12**	**6**	**81**
% of responses							
Yes	95%	80%	87%	94%	83%	83%	89%
No	5%	20%	13%	6%	8%	17%	10%
Don't know					8%		1%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Summary of key points on Schools

- Of the 147 volunteers surveyed, only 84 answered questions on schools, these being the volunteers from 12 of the 19 villages surveyed.
- The majority of communities had only one school but a few had two, three or four schools.
- Half of the volunteers said their school had a DRR committee, the highest percentage of responses coming from Pyapon. About half of these volunteers said that cooperation was good with these committees, with the highest percentage of positive responses coming from volunteers in the exit and consolidation villages.
- About one third of the volunteers felt that students know what to do during and after a disaster, the highest percentages being from Labutta.
- About 50% of the volunteers said their schools had an evacuation plan but only 16% said schools had conducted simulations or drills (highest responses were from Labutta and the consolidation areas of Pyapon).
- Approximately 30% said the villages had a backup plan to avoid disruption to school operations in the event of a disaster occurring during the school calendar.
- Regarding the attitudes of volunteers towards student capacity, 86% said felt that girls could be rescue workers.
- Almost 90% felt that students could make a contribution toward disaster management and planning in their schools.
- But a high percentage of volunteers in Sittwe (33%) did not feel girls could be rescue workers and 20% of volunteers in Pathein did not feel students could make a contribution to disaster management and planning.

IV. Findings – General Population

This section now discusses the results obtained from the analysis of the data from the General Population survey under the following headings:

1. Demographics
2. Hazard awareness and preparedness
3. Vulnerability
4. Early warning and planning
5. Disaster response
6. Institutional arrangements
7. Post disaster (psychosocial impact)

IV.1 Demographics

Of the total of 611 persons were interviewed, 52% were female. Only in the consolidation villages of Pyapon was the percentage of males slightly higher than females (51%).

TABLE IV.1.1 – Number & % of respondents by gender

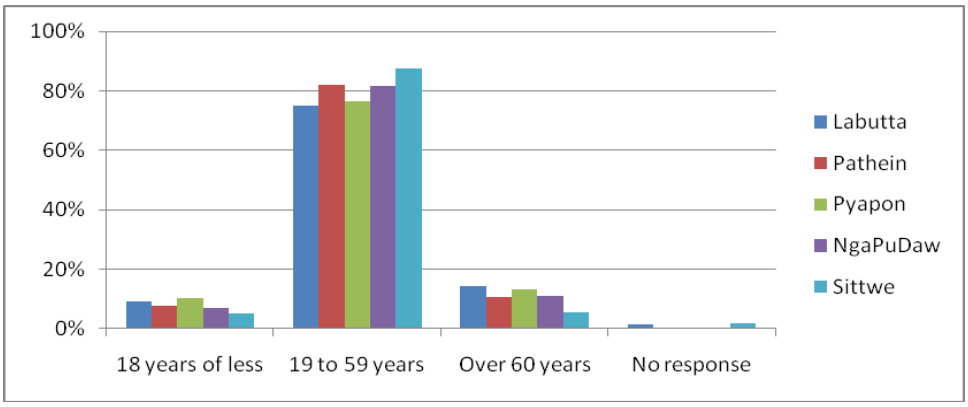
Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Male	36	31	35	26	62	105	295
Female	40	35	33	34	64	110	316
	76	**66**	**68**	**60**	**126**	**215**	**611**
%'s							
Male	47%	47%	51%	43%	49%	49%	48%
Female	53%	53%	49%	57%	51%	51%	52%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

The respondents' ages covered a wide range, from about 7% children to 10% over 60 years old. Table IV.1.2 shows the numbers of respondents per age group and Chart IV.1.1 summarizes these by percentage.

TABLE IV.1.2 – Number & % of respondents by age

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
18 years of less	7	5	6	7	9	11	45
19 - 30 years	11	10	16	15	31	57	140
31 - 40 years	20	16	16	12	30	61	155
41 - 50 years	18	19	8	10	30	42	127
51 - 59 years	8	9	15	6	12	28	78
60 - 70 years	9	6	5	5	9	9	43
Over 70 years	2	1	2	5	5	3	18
No response	1					4	5
	76	**66**	**68**	**60**	**126**	**215**	**611**

CHART IV.1.1 – % of respondents by main age groups



The majority (64%) of all respondents were Buddhist, with Muslims being the second largest group (23%, mostly all in Sittwe) and 12% Christians (the most of whom are in Labutta and Pathein). Only one respondent did not give a response to this question.

TABLE IV.1.3 – Number & % of respondents by religion

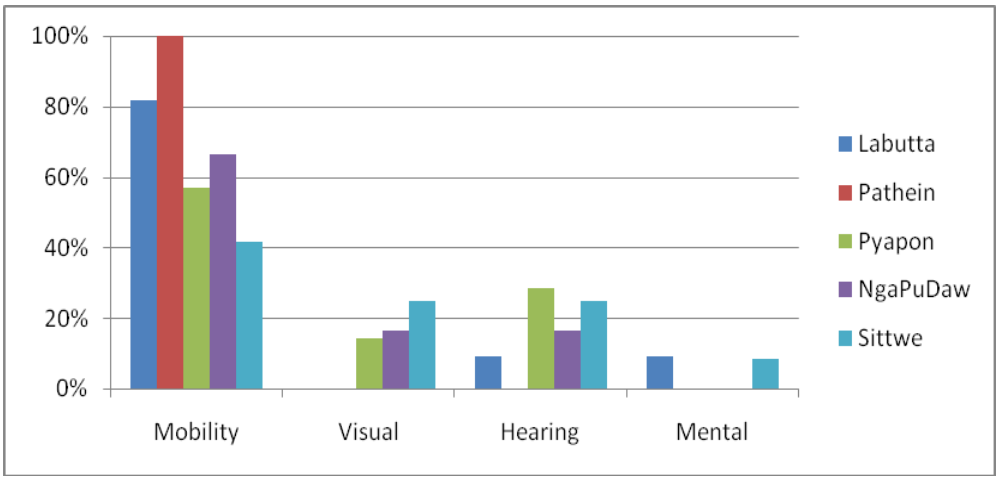
Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	**Exit**	**Consol**	**Consol**	**New**	**New**	**New**	
Buddhist	27	38	68	60	124	75	392
Muslim	2	1				139	142
Christian	47	27			1	1	76
No response					1		1
	76	**66**	**68**	**60**	**126**	**215**	**611**
%'s							
Buddhist	36%	58%	100%	100%	98%	35%	64%
Muslim	3%	2%				65%	23%
Christian	62%	41%			1%	0%	12%
No response					1%		0%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Forty seven of the respondents (8%) considered themselves to have a disability (Table IV.1.4). These persons were spread over all townships but with slightly higher percentage in Labutta, and almost evenly divided between men and women. The most common form of disability was mobility, with only a few respondents mentioning other types such as visual, hearing or mental (Chart IV.1.2).

TABLE IV.1.4 – Number & % of respondents with disability

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By gender	
Intervention level	**Exit**	**Consol**	**Consol**	**New**	**New**	**New**		**Male**	**Female**
Yes	11	4	8	6	6	12	47	22	25
No	65	62	60	54	120	201	562	272	290
Don't know						2	2	1	1
	76	**66**	**68**	**60**	**126**	**215**	**611**	**295**	**316**
Do you have a disability	%'s								
Yes	14%	6%	12%	10%	5%	6%	8%	7%	8%
No	86%	94%	88%	90%	95%	93%	92%	92%	92%
Don't know						1%	0%	0%	0%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

CHART IV.1.2 – Types of disability (% of persons with disability)

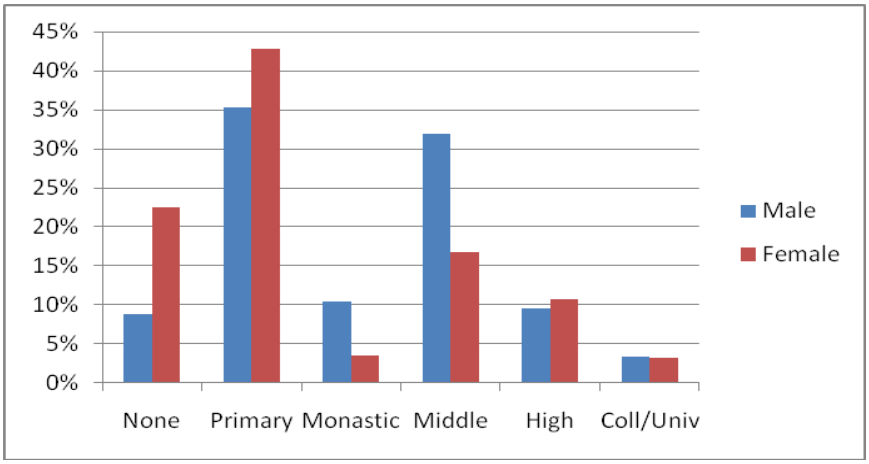


The majority of respondents have received some form of education, with the largest percentage educated to primary, monastic or middle school level (69%). Only 13% have attended educational institutions above this level and 16% of respondents say they have not received any education at all. Comparison by gender shows that a higher percentage of those who did not receive any education are females. On the other hand, a slightly higher percentage of females have received education above middle school level (Chart IV.1.3).

TABLE IV.1.5 – Number & % of respondents by highest level of education received

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By gender	
Intervention level	Exit	Consol	Consol	New	New	New		Male	Female
None	5	7		2	3	80	97	26	71
Primary	43	28	29	33	30	76	239	104	135
Monastic	5	2	14	12	7	2	42	31	11
Middle	18	17	19	9	44	40	147	94	53
High	4	11	4		30	13	62	28	34
Coll/Univ	1	1	2	2	11	3	20	10	10
No response				2	1	1	4	2	2
	76	**66**	**68**	**60**	**126**	**215**	**611**	**295**	**316**
%'s									
None	7%	11%		3%	2%	37%	16%	9%	22%
Primary	57%	42%	43%	55%	24%	35%	39%	35%	43%
Monastic	7%	3%	21%	20%	6%	1%	7%	11%	3%
Middle	24%	26%	28%	15%	35%	19%	24%	32%	17%
High	5%	17%	6%		24%	6%	10%	9%	11%
Coll/Univ	1%	2%	3%	3%	9%	1%	3%	3%	3%
No response				3%	1%	0%	1%	1%	1%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

CHART IV.1.3 – Comparison of education levels by gender (% of respondents)



While the discussion above focused on the respondent, the following questions were asked in relation to the household (HH) of the respondent. They were first asked about the gender of the head of household. Of all 611 HHs, 14% were female headed households (FHH), with the profile relatively similar across all townships.

TABLE IV.1.6 – Gender of Head of Household

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Male	64	57	60	50	112	181	524
Female	12	9	8	10	14	34	87
	76	**66**	**68**	**60**	**126**	**215**	**611**
%'s							
Male	84%	86%	88%	83%	89%	84%	86%
Female	16%	14%	12%	17%	11%	16%	14%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

The majority of HHs were headed by adults from 19 to 60 years old. Only one HH was headed by a child (a boy) and 9% of HHs headed by people over 60 years. One third of these HHs headed by older persons (19 out of the 57) were female headed HHs.

TABLE IV.1.7 – Age of Head of Household

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Child (18 or under)						1	1
19-60 yrs	68	62	60	53	111	199	553
Over 60	8	4	8	7	15	15	57
	76	**66**	**68**	**60**	**126**	**215**	**611**
%'s							
Child (18 or under)						0%	0%
19-60 yrs	89%	94%	88%	88%	88%	93%	91%
Over 60	11%	6%	12%	12%	12%	7%	9%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

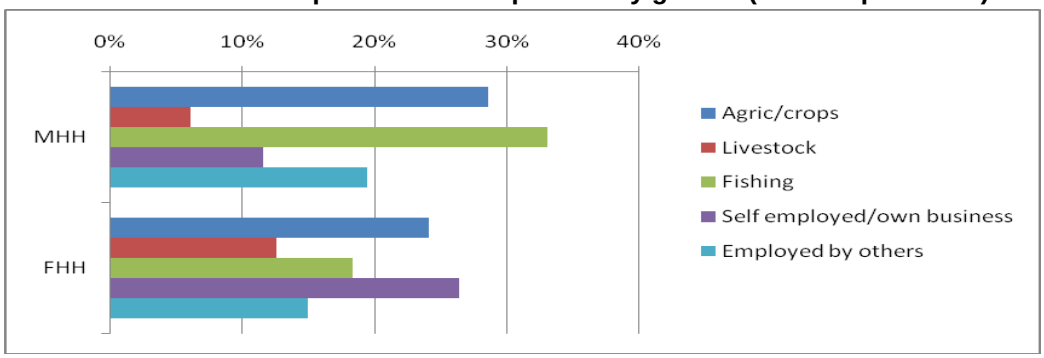
The main occupation of these HHs as reported by the respondents shows that two-thirds of them (66%) are engaged in occupations that are vulnerable to weather fluctuations (agriculture, livestock or fishing). The others either run their own business or are employed by others – either as daily laborers, by the private sector or as government employees.

TABLE IV.1.8 – Occupation of Household

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By gender	
Intervention level	Exit	Consol	Consol	New	New	New		MHH	FHH
Agric/crops	9	37	6	22	55	42	171	150	21
Livestock	2		5	3	2	31	43	32	11
Fishing	37	6	32	17	35	62	189	173	16
Self employed/own business	8	8	13	5	13	37	84	61	23
Daily wage labor	16	10	10	11	16	29	92	82	10
Employed - private sector		3			2	8	13	13	
Employed - by government		2	1	1	2	4	10	7	3
Miax others/no response	4		1	1	1	2	9	6	3
	76	**66**	**68**	**60**	**126**	**215**	**611**	**524**	**87**
%'s									
Agric/crops	12%	56%	9%	37%	44%	20%	28%	29%	24%
Livestock	3%		7%	5%	2%	14%	7%	6%	13%
Fishing	49%	9%	47%	28%	28%	29%	31%	33%	18%
Self employed/own business	11%	12%	19%	8%	10%	17%	14%	12%	26%
Daily wage labor	21%	15%	15%	18%	13%	13%	15%	16%	11%
Employed - private sector		5%			2%	4%	2%	2%	
Employed - by government		3%	1%	2%	2%	2%	2%	1%	3%
Miax others/no response	5%		1%	2%	1%	1%	1%	1%	3%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Comparison of occupations by gender shows that a higher percentage of FHHs engage in livestock raising and running own businesses whereas more MHHs are engaged in fishing or employed by others.

CHART IV.1.4 – Comparison of occupations by gender (% of respondents)

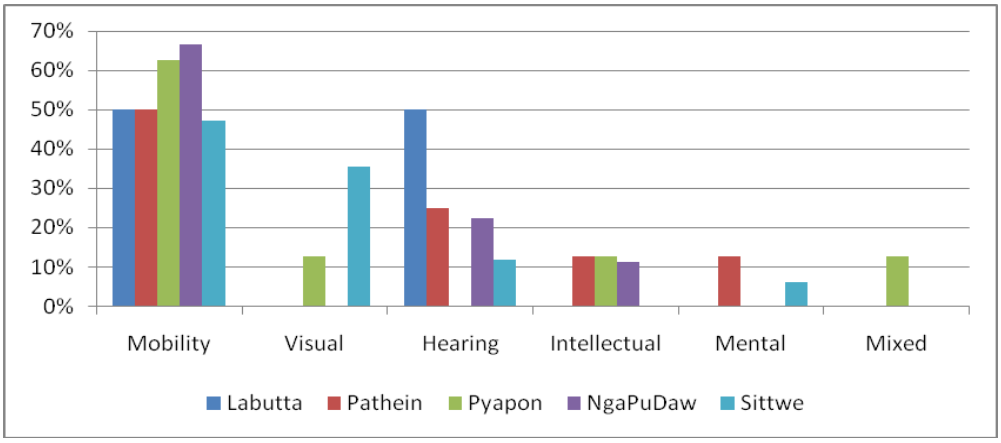


Forty six respondents (8%) have HH members with a disability (Table IV.1.9). However, 11 of these are the same respondents who have own disability and it is not clear if they include themselves again in this answer as in all cases except one, the type of disability (e.g. mobility, visual, hearing) is the same. Similar to the respondents themselves, the main type of disability was mobility (Chart IV.1.4).

TABLE IV.1.9 – Members of respondent's HH who have disability

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Yes	4	8	6	2	9	17	46
No	72	58	62	58	117	198	565
	76	**66**	**68**	**60**	**126**	**215**	**611**
%'s							
Yes	5%	12%	9%	3%	7%	8%	8%
No	95%	88%	91%	97%	93%	92%	92%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

CHART IV.1.5 – Types of disability of HH members (% of responses)



Summary of key points on Demographics

- Of the 611 respondents interviewed, 52% were female; 64% were Buddhist, 23% Muslim (mainly from Sittwe) and 12% Christian.
- Eight percent of the respondents considered themselves to have a disability (mainly mobility) and 8% also mentioned that they have HH members who have disability (also mainly mobility).
- The majority of respondents have been educated, mostly either primary, monastic or middle school. Of the 16% of respondents who have not received any education, the majority of these were female (22% of females compared to 9% of males).
- The households of the respondents were headed by females in 14% of the cases.
- Two thirds (66%) of households engage in farming or fishing. The others are either self employed (14%) or employed by others (either daily laborers, in the private sector or as government staff).

IV.2 Hazard Awareness and Preparedness

Before exploring awareness on hazards and preparedness, respondents were asked in general about the hazards that have occurred over the last 10 years in their community. Only 6% did not know or said there were none. The other respondents were able to name one or more hazards that have occurred. By far the most frequently mentioned was cyclones/strong storms (mentioned by almost 90% of respondents). While floods were mentioned by only 16% of respondents overall, this hazard was significant or Pyapon, where 44% of the respondents in the consolidation villages mentioned it. Likewise for fires, while mentioned by only 12% overall, it was mentioned by 33% of Sittwe respondents.

TABLE IV.2.1 – Hazards that have occurred in the last 10 years

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Earthquake	7	2	2	2	10	5	28
Flood	8		30	10	19	29	96
Cyclone/strong storm	74	62	67	59	108	169	539
Tsunami	20	1			10	7	38
Tornado/wind funnel	2	1	2	1	1	9	16
Fire	1				2	70	73
Misc. others		1	1		6	5	13
None/don't know	2	4		1	16	11	34
Total HHs who responded	**74**	**62**	**68**	**59**	**110**	**204**	**577**
% of respondents to each hazard							
Earthquake	9%	3%	3%	3%	8%	2%	5%
Flood	11%		44%	17%	15%	13%	16%
Cyclone/strong storm	97%	94%	99%	98%	86%	79%	88%
Tsunami	26%	2%			8%	3%	6%
Tornado/wind funnel	3%	2%	3%	2%	1%	4%	3%
Fire	1%				2%	33%	12%
Misc. others		2%	1%		5%	2%	2%
None/don't know	3%	6%		2%	13%	5%	6%

The 577 respondents to the above question were asked to rank these hazards according to those that had the greatest impact on their community. The ranking of first main hazard showed that cyclones/ strong storms was the hazard considered to have had the greatest impact by most respondents, followed by floods and then fire (both of which, although identified by few respondents in overall terms, were highlighted by high percentages of Pyapon and Sittwe respectively).

TABLE IV.2.2 – Ranking of main hazard that has impacted on community

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Cyclone/strong storm	73	62	53	55	99	149	491
Flood			15	4	8	16	43
Fire					1	31	32
Tornado/wind funnel						6	6
Tsunami	1				1	1	3
Drought					1		1
Erosion/loss land						1	1
	74	**62**	**68**	**59**	**110**	**204**	**577**
%'s							
Cyclone/strong storm	99%	100%	78%	93%	90%	73%	85%
Flood			22%	7%	7%	8%	7%
Fire					1%	15%	6%
Tornado/wind funnel						3%	1%
Tsunami	1%				1%	0%	1%
Drought					1%		0%
Erosion/loss land						0%	0%

Only 144 respondents (23%) ranked a second hazard that had impact. These were spread over a range of hazards as shown in Table IV.2.3 below.

TABLE IV.2.3 – Ranking of 2nd main hazard that has impacted on community

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Earthquake	4	1			1	4	10
Flood	4		13	4	6	9	36
Cyclone/strong storm	1		6	4	5	18	34
Tsunami	17					5	22
Tornado/wind funnel	2					2	4
Fire						38	38
	28	**1**	**19**	**8**	**12**	**76**	**144**
% of respondents							
Earthquake	5%	2%			1%	2%	2%
Flood	5%		19%	7%	5%	4%	6%
Cyclone/strong storm	1%		9%	7%	5%	9%	6%
Tsunami	23%					2%	4%
Tornado/wind funnel	3%					1%	1%
Fire						19%	7%

There were only 11 responses to the ranking of a third main hazard so the results from these second and third rankings do not change the overall ranking of hazards – i.e. cyclones/storms, floods and fire. Therefore analysis of understanding about these hazards will concentrate on these three as identified as being the hazards that had the greatest impact.

Why these hazards occurred?

Respondents who identified **cyclones/strong storms** as their main hazard (491) plus those who identified it as a second hazard (34) gave the following reasons for why this hazard occurred.

TABLE IV.2.4 – Why cyclones/strong storms occurred

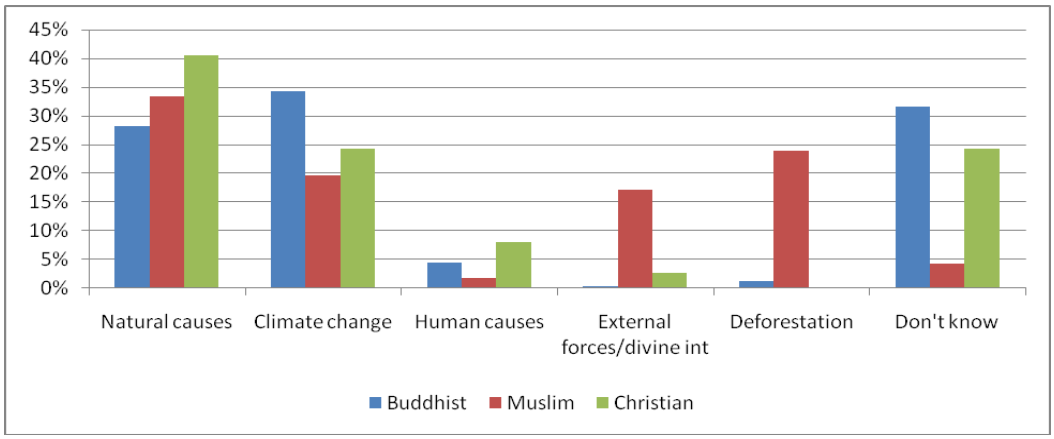
Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Natural causes	31	22	9	10	32	60	164
Climate change	13	23	23	20	33	43	155
Human causes	10	2		1	8	2	23
External forces/divine int	2		1			20	23
Deforestation			2		1	29	32
Don't know	18	15	24	28	30	13	128
	74	**62**	**59**	**59**	**104**	**167**	**525**
% of respondents who identified this hazard							
Natural causes	42%	35%	15%	17%	31%	36%	31%
Climate change	18%	37%	39%	34%	32%	26%	30%
Human causes	14%	3%		2%	8%	1%	4%
External forces/divine int	3%		2%			12%	4%
Deforestation			3%		1%	17%	6%
Don't know	24%	24%	41%	47%	29%	8%	24%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

The highest responses above are fairly evenly divided between natural causes and climate change but a high percentage (24%) could not give any answer. The highest percentage of those who could not answer were in Pyapon (over 40% in both the consolidation and new villages). While the overall percentages for divine intervention and deforestation were low, these percentages were a significant percentage of the Sittwe respondents.

Comparison of responses by gender shows that more of the 24% who don't know why this hazard occurred are female (29% don't know compared to 16% of males). Otherwise responses from females are in similar proportion for each cause as the male responses. Comparing by religion shows some more significant differences, with the highest responses for deforestation and divine intervention being

given by Muslim respondents. Of those who don't know why, the highest percentage of these were Buddhists, with very few Muslim respondents not knowing why. The comparison of reasons by religion is shown in the Chart IV.2.1 below.

CHART IV.2.1 – Why cyclones/storms occur (comparison by religion, % of respondents)



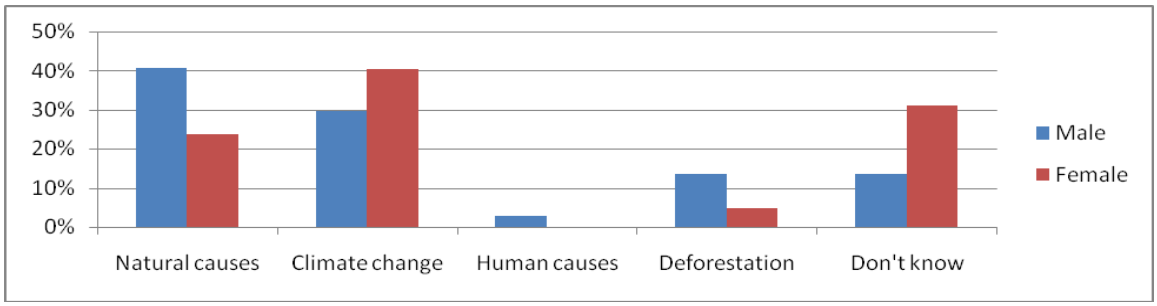
For the second main hazard, **floods**, responses to why this occurred were accumulated from those who identified it as their first main hazard (43 respondents) and the 36 who identified it as their second hazard (Table IV.2.5). There were no respondents from Pathein who considered flood a main hazard and only four from Labutta. Very few respondents noted any human causes for floods, with most responses roughly evenly divided between natural causes and climate change. Quite a high percentage (23%) did not know why, with a higher percentage of respondents from the consolidation areas of Pyapon not knowing compared to other areas.

TABLE IV.2.5 – Why FLOODS occurred

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Natural causes	2		5	2	5	11	25
Climate change	2		12	4	5	5	28
Human causes						1	1
Deforestation			2			5	7
Don't know			9	2	4	3	18
	4		**28**	**8**	**14**	**25**	**79**
% of respondents who identified this hazard							
Natural causes	50%		18%	25%	36%	44%	32%
Climate change	50%		43%	50%	36%	20%	35%
Human causes						4%	1%
Deforestation			7%			20%	9%
Don't know			32%	25%	29%	12%	23%
	100%		**100%**	**100%**	**100%**	**100%**	**100%**

As the flood hazard was identified mostly by Buddhist respondents, the comparison with other religions is not so relevant but comparing the responses by gender shows quite a higher percentage of women who don't know why floods occurred. The proportion of responses given per each of the possible causes is also quite different (see Chart IV.2.2).

CHART IV.2.2 – Why floods occur (comparison by gender, % of respondents)



The third ranked hazard affected mainly Sittwe township, with only one respondent from outside this township ranking fire as a main hazard (in NgaPuDaw). Analysis of why fires occurred shows that the majority of respondents believe it to be caused by humans. This is relatively uniform across gender and religion (Table IV.2.6).

TABLE IV.2.6 – Why FIRES occurred

Township	NgaPuDaw	Sittwe	Total	By gender		By religion	
Intervention level	New	New		Male	Female	Buddhist	Muslim
Natural causes		1	1	1		1	
Human causes	1	66	67	36	31	31	36
Don't know		2	2	1	1	1	1
	1	**69**	**70**	**38**	**32**	**33**	**37**
% of respondents who identified this hazard							
Natural causes		1%	1%	3%		3%	
Human causes	100%	96%	96%	95%	97%	94%	97%
Don't know		3%	3%	3%	3%	3%	3%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Information about these hazards

Radio/TV was the main source for information on **cyclones/storms**, mentioned by 85% of respondents. Information from military/police and from village/tract heads were next but only mentioned by less than a quarter of the HHs. Other sources were mentioned by very few HHs.

TABLE IV.2.7 – Sources of information on Cyclones/Storms

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Radio/TV	68	56	48	40	94	142	448
Word of mouth (military/police)	22	6	12	2	7	63	112
Word of mouth (vill/tract head)	10	4	1		12	31	58
Simulation/drill exercise	3	1	2	2	1	7	16
Word of mouth (family/friend)	7	1	2		2		12
Newspaper/magazine	1	1		1	3	2	8
Word of mouth (government)		1		1	2	2	6
Misc. others	1	4	2		2		9
Don't remember	4	4	6	15	7	6	42
Multiple responses	**116**	**78**	**73**	**61**	**130**	**253**	**711**
% of respondets who identified							
Radio/TV	92%	90%	81%	68%	90%	85%	85%
Word of mouth (military/police)	30%	10%	20%	3%	7%	38%	21%
Word of mouth (vill/tract head)	14%	6%	2%		12%	19%	11%
Simulation/drill exercise	4%	2%	3%	3%	1%	4%	3%
Word of mouth (family/friend)	9%	2%	3%		2%		2%
Newspaper/magazine	1%	2%		2%	3%	1%	2%
Word of mouth (government)		2%		2%	2%	1%	1%
Misc. others	1%	6%	3%		2%		2%
Don't remember	5%	6%	10%	25%	7%	4%	8%

The type of information received from these sources by the majority of respondents was information about impact of the hazard (50% of respondents). Other types of information mentioned by just over 20% of respondents were the time of year it might occur, where it might impact and what to do to prepare for the hazard (Table IV.2.8)

TABLE IV.2.8 – Types of information received about Cyclones/Storms

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Nothing/no information	14	10	12	18	15	14	83
Impact	45	35	33	21	55	75	264
How often it occurs	3	1	7	6	16	32	65
What time of year	13	9	8	12	13	64	119
Where it affects	18	15	19	10	27	24	113
How to prepare	26	12	21	16	23	5	103
Multiple responses	**119**	**82**	**100**	**83**	**149**	**214**	**747**
% of respondets who mentioned each type							
Nothing/no information	19%	16%	20%	31%	14%	8%	16%
Impact	61%	56%	56%	36%	53%	45%	50%
How often it occurs	4%	2%	12%	10%	15%	19%	12%
What time of year	18%	15%	14%	20%	13%	38%	23%
Where it affects	24%	24%	32%	17%	26%	14%	22%
How to prepare	35%	19%	36%	27%	22%	3%	20%

The main source of information on **floods**, like cyclones above, was Radio/TV (almost 60% of respondents indentified this source). Other sources were mentioned by 20% or less of those who ranked this hazard as either first or second. The type of information received was similar to that received by respondents for cyclones/storms above.

TABLE IV.2.9 – Sources of information on Floods

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Radio/TV	3		13	7	8	16	47
Word of mouth (military/police)	3		2		3	8	16
Word of mouth (vill/tract head)	1		2	2	6	3	14
Misc. other sources			2		1	3	6
Don't remember			10			3	13
Multiple responses	**7**		**29**	**9**	**18**	**33**	**96**
% of recipients who ranked this hazard							
Radio/TV	75%		46%	88%	57%	64%	59%
Word of mouth (military/police)	75%		7%		21%	32%	20%
Word of mouth (vill/tract head)	25%		7%	25%	43%	12%	18%
Misc. other sources			7%		7%	12%	8%
Don't remember			36%			12%	16%

TABLE IV.2.10 – Types of information received about Floods

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Nothing/no information	2		13	1	2	3	21
Impact			10	5	3	8	26
How often it occurs			2	1	3		6
What time of year			2	2	2	8	14
Where it affects			2	2	3	10	17
How to prepare	2		7	2	5	1	17
Multiple responses	**4**		**36**	**13**	**18**	**30**	**101**
% of respondents who identified this hazard							
Nothing/no information	50%		36%	8%	11%	10%	21%
Impact			28%	38%	17%	27%	26%
How often it occurs			6%	8%	17%		6%
What time of year			6%	15%	11%	27%	14%
Where it affects			6%	15%	17%	33%	17%
How to prepare	50%		19%	15%	28%	3%	17%

Sources of information regarding the third hazard, **fires**, differed from the first two hazards in that Radio/TV was not identified as a main source. Word of mouth, particularly via military/police was the main source identified followed by information from the village/tract heads (Table IV.2.11).

TABLE IV.2.11 – Sources of information on Fires

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't remember						10	10
Word of mouth (military/police)						40	40
Word of mouth (vill/tract head)					1	19	20
Simulation/drill exercise						7	7
Radio/TV						3	3
Misc. others					1	3	4
Multiple responses					**2**	**82**	**84**
% of respondents who ranked this hazard							
Don't remember						14%	14%
Word of mouth (military/police)						58%	57%
Word of mouth (vill/tract head)					100%	28%	29%
Simulation/drill exercise						10%	10%
Radio/TV						4%	4%
Misc. others					100%	4%	6%

Information received from these sources was mostly about impact, with some respondents mentioning how often and where it could occur. Very few respondents mentioned receiving information about how to prepare (Table IV.2.12).

TABLE IV.2.12 – Types of information received about Fires

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Nothing/no information					1	12	13
Impact						38	38
How often it occurs						21	21
What time of year						8	8
Where it affects						14	14
How to prepare						2	2
Multiple responses					**1**	**95**	**96**
% of respondents who identied this hazard							
Nothing/no information					100%	13%	14%
Impact						40%	40%
How often it occurs						22%	22%
What time of year						8%	8%
Where it affects						15%	15%
How to prepare						2%	2%

Preparedness

For each of the three main hazards, those who ranked them were asked what they could do to prepare for such a hazard occurring. Multiple answers were allowed but most respondents only mentioned between one and four things that could be done.

For the main hazard, **Cyclones/storms**, the maximum number of respondents who identified any particular measure that could be undertaken was 228 (43% of those who ranked this hazard as number one or number two) – stockpiling food, water etc. Next most frequently mentioned were identifying safe havens (26%) and relocating to a safer place (25%). All other possible measures were mentioned by less than a quarter of the respondents, with some key measures that could be done receiving very little mention. Seventy five respondents (14%) could not identify any measure that could be undertaken. The full list of responses received is shown in Table IV.2.13 below.

TABLE IV.2.13 – How to prepare for Cyclones/Strong storms

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Nothing/don't know	4	11	9	9	21	21	75
Stockplie food/water etc	58	32	26	27	39	46	228
Identify safe havens	13	20	7	5	25	66	136
Relocate to safer place	30	20	20	18	28	15	131
Make HH disaster plan	4	6	15	16	16	23	80
Strengthen existing houses	24	4	5	7	9	31	80
Protect livelihood items	4	4	4	1	5	7	25
Establish evacuation protocol	1		3	1	3	16	24
Protect important documents	1		4	1	2	9	17
Save money	4		1	2	2	7	16
Assess hazards	2	2			2	8	14
Establish EWS	5		1	1	1	5	13
Make vill disaster plan	1	2	2		3	4	12
Teach children					1	11	12
Assess vulnerability		5			4	1	10
Build safer houses	1		1		5	3	10
Education/public awareness	2	1	1	1			5
Diversify livelihoods	1	4					5
Village mitigation projects	1	1			3		5
Help vulnerable people	1	3				1	5
Misc. other actions	1		1		1	4	7
Multiple responses	**158**	**115**	**100**	**89**	**170**	**278**	**910**
% of respondets who ranked this hazard							
Nothing/don't know	5%	18%	15%	15%	20%	13%	14%
Stockplie food/water etc	78%	52%	44%	46%	38%	28%	43%
Identify safe havens	18%	32%	12%	8%	24%	40%	26%
Relocate to safer place	41%	32%	34%	31%	27%	9%	25%
Make HH disaster plan	5%	10%	25%	27%	15%	14%	15%
Strengthen existing houses	32%	6%	8%	12%	9%	19%	15%
Protect livelihood items	5%	6%	7%	2%	5%	4%	5%
Establish evacuation protocol	1%		5%	2%	3%	10%	5%
Protect important documents	1%		7%	2%	2%	5%	3%
Save money	5%		2%	3%	2%	4%	3%
Assess hazards	3%	3%			2%	5%	3%
Establish EWS	7%		2%	2%	1%	3%	2%
Make vill disaster plan	1%	3%	3%		3%	2%	2%
Teach children					1%	7%	2%
Assess vulnerability		8%			4%	1%	2%
Build safer houses	1%		2%		5%	2%	2%
Education/public awareness	3%	2%	2%	2%			1%
Diversify livelihoods	1%	6%					1%
Village mitigation projects	1%	2%			3%		1%
Help vulnerable people	1%	5%				1%	1%
Misc. other actions	1%		2%		1%	2%	1%

In relation to the second ranked hazard, **floods**, less than 40% of respondents identified any one of the measures that could be taken to prepare for floods. The measure that received the highest response was similar to the response to cyclones/storms – i.e. stockpiling food and water (38% of respondents). Other responses mentioned by between 20 and 25% of respondents were to relocate to a safer place, identify safe havens, protect important documents and make a household disaster plan. The full list of responses is shown in Table IV.2.14.

TABLE IV.2.14 – How to prepare for Floods

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Nothing/don't know			5		2	4	11
Stockplie food/water etc	2		11	4	5	8	30
Relocate to safer place	1		9	1	5	3	19
Identify safe havens	1		2	1	3	10	17
Protect important documents	1		4	1	2	9	17
Make HH disaster plan	1		8	2	3	2	16
Establish evacuation protocol			1	1		3	5
Make vill disaster plan				1	2	1	4
Establish EWS					1	3	4
Teach children						3	3
Protect livelihood items			1		1	1	3
Build safer houses			2			1	3
Strengthen existing houses			2		1		3
Involve government						2	2
Save money			1			1	2
Misc. other measures				1	1	2	4
Multiple responses	**6**		**46**	**12**	**26**	**53**	**143**
% of respondents who ranked this hazard							
Nothing/don't know			18%		14%	16%	14%
Stockplie food/water etc	50%		39%	50%	36%	32%	38%
Relocate to safer place	25%		32%	13%	36%	12%	24%
Identify safe havens	25%		7%	13%	21%	40%	22%
Protect important documents	25%		14%	13%	14%	36%	22%
Make HH disaster plan	25%		29%	25%	21%	8%	20%
Establish evacuation protocol			4%	13%		12%	6%
Make vill disaster plan				13%	14%	4%	5%
Establish EWS					7%	12%	5%
Teach children						12%	4%
Protect livelihood items			4%		7%	4%	4%
Build safer houses			7%			4%	4%
Strengthen existing houses			7%		7%		4%
Involve government						8%	3%
Save money			4%			4%	3%
Misc. other measures				13%	7%	8%	5%

Knowledge of preparedness measures for the third hazard, **fire**, is difficult to generalize as the hazard was raised mainly by only one township (Sittwe) and the numbers of responses are relatively low as a percentage of the total respondents (11%). However, the responses represent 32% of the total respondents for Sittwe township so can have some importance to the project in that area. But as with the other two hazards discussed above, the respondents gave very limited range of responses to what could be done to prepare for the hazard they identified. The highest number of response was to identify safe haven (22 respondents). Other preparedness measures were raised by very few respondents. The total responses are shown in Table IV.2.15 below.

TABLE IV.2.15 – How to prepare for Fires

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Identify safe havens						22	22
Protect important documents						7	7
Stockplie food/water etc						5	5
Assess hazards						3	3
Make vill disaster plan						3	3
Make HH disaster plan						3	3
Establish EWS						3	3
Establish evacuation protocol						3	3
Relocate to safer place						3	3
Teach grandparents						2	2
Have village DT/volunteers						2	2
Protect livelihood items						2	2
Assess vulnerability						1	1
Teach children						1	1
Multiple responses						**60**	**60**

Summary of key points on Hazard Awareness and Preparation

- Most respondents could name a number of hazards that have occurred in the last ten years; only 6% did not know. Similar to the volunteers above, the main hazard ranked by the majority of respondents was cyclones/strong storms. The second one (but considerably less in number of respondents than cyclones was flood, with the majority of responses ranking this one coming from Pyapon. Fire was the hazard with the third highest impact but these responses came almost exclusively from one township, Sittwe.
- Knowledge about why these hazards occurred revealed that almost a quarter of the respondents did not know why the two main hazards occurred (24% for cyclones/storms and 23% for floods). A higher number of female respondents did not know. Among those who did give reasons, the responses were about evenly divided between natural causes and climate change for cyclones and floods. But a high percentage of Muslim respondents noted “divine intervention” as a cause of cyclones/storms. Fires were seen to be caused by humans.
- Radio and TV were the main sources of information about cyclones/storms and floods (85% of respondents for cyclones/storms and 59% of respondents for floods). Information by word of mouth (mainly from military, police, village or tract leaders) was mentioned by less than 20% of respondents to these hazards. But word of mouth from military or police was the main source of information about fire hazards by the Sittwe respondents. The type of information received was mainly about the impact of hazards (about 50%), with around 20% of respondents getting information about where and when the hazard might occur. There was relatively less information received by respondents about how to prepare for these hazards – 20% for cyclones/storms, 17% for floods and only 2% for fires.
- Quite a high number of respondents could not give any information about how to prepare for the two main hazards – 14% of respondents in both cases. The responses given by those who did know were quite low, given the numerous things that they could possibly do. Most respondents only noted two or three things. The preparedness measure that received the highest response to both these hazards was “stockpiling food and water” – 43% of respondents for cyclones/storms and 38% for floods. The highest response about preparedness measures for fires was to find a safe place. Overall, the above responses show a relatively low level of knowledge about possible measures that can be taken at HH or village level to prepare themselves for these hazards.

IV.3 Vulnerability

This section on vulnerability assessed respondents knowledge of who could be the most affected groups in respect of the main hazard that they identified in the previous section above. Then for each vulnerable group that they identified, the following issues were explored:

- Why they think the group they selected was particularly affected?
- What did they think the community could do to reduce the impact on each group (and were their suggestions already in the village plans)?
- Their attitude about the inclusion of these vulnerable groups in village DRR management.

The responses to these questions are presented below for each of the three main hazards identified in the previous section – cyclones/strong storms, floods and fires.

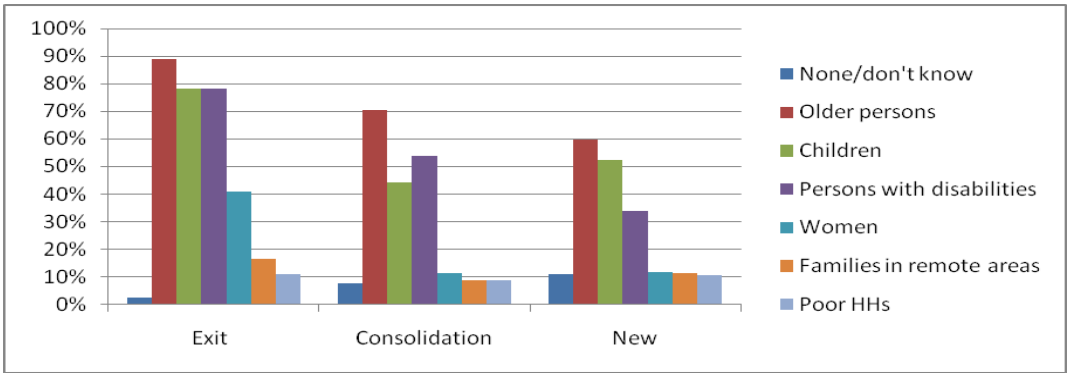
3.1 Cyclones/Strong Storms (C/S)

The majority of respondents identified older persons as most affected by cyclones/storms, followed by children and persons with disabilities (Table IV.3.1). Only 16% of respondents mentioned women and 11% mentioned poor households. As would be expected, the understanding about vulnerable groups was highest among respondents from the exit area of Labutta (Chart IV.3.1).

TABLE IV.3.1 – C/S– Most affected groups

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
None/don't know	2	6	3	4	13	17	45
Older persons	65	46	35	39	56	86	327
Children	57	29	22	27	36	96	267
Persons with disabilities	57	30	32	28	31	44	222
Women	30	5	8	9	7	20	79
Families in remote areas	12	4	6	3	21	11	57
Poor HHs	8	5	5	6	14	12	50
Fishing communities		1	3	1	2	3	10
Misc. others	1	1					2
Multiple responses	**232**	**127**	**114**	**117**	**180**	**289**	**1059**
% of all respondents prioritize Cyclone/storms							
None/don't know	3%	10%	6%	7%	13%	11%	9%
Older persons	89%	74%	66%	71%	57%	58%	67%
Children	78%	47%	42%	49%	36%	64%	54%
Persons with disabilities	78%	48%	60%	51%	31%	30%	45%
Women	41%	8%	15%	16%	7%	13%	16%
Families in remote areas	16%	6%	11%	5%	21%	7%	12%
Poor HHs	11%	8%	9%	11%	14%	8%	10%
Fishing communities		2%	6%	2%	2%	2%	2%
Misc. others	1%	2%					0%

CHART IV.3.1 – C/S – Most affected groups (by intervention area, % of respondents)



The analysis of responses regarding why these groups are most affected, what they community can do and attitudes about inclusion is discussed below for the three main groups they identified – older persons, children and persons with disabilities. Responses in relation to other affected groups were too low to draw any general conclusions.

C/S – Older persons

The main reason why respondents felt that older persons were more affected by cyclones/storms was because they could not evacuate to safe place as easily as other people (90% of responses).

TABLE IV.3.2 – C/S – Why older persons most affected

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know	4	1		3			8
Not receive warning	1					12	13
Not able to evacuate	60	45	34	32	55	77	303
Not resilient to extreme weath	2	1	1	4	2		10
No place to go	1						1
Multiple responses	**68**	**47**	**35**	**39**	**57**	**89**	**335**
% of responses							
Don't know	6%	2%		8%			2%
Not receive warning	1%					13%	4%
Not able to evacuate	88%	96%	97%	82%	96%	87%	90%
Not resilient to extreme weath	3%	2%	3%	10%	4%		3%
No place to go	1%						0%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Suggestions to reduce the impact on these older persons naturally followed from the main reason given above (difficult to evacuate), with the majority of respondents saying that family and neighbors should help. Only a few gave suggestions for intervention by DRR committees (regarding early warning messages) but quite a high percentage (16%) could give no suggestions. The highest percentage of those who did not know were in the new areas of NgaPuDaw and Sittwe.

TABLE IV.3.3 – C/S – How to reduce impact on older persons

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know	8	2	4	4	19	17	54
DRR comm send specific messages	8	8	2	3		5	26
Family/neighbors help to evacuate	48	38	28	31	36	66	247
Youth should help them	7	2	1	2	1		13
Misc. other responses	2	1	1	1			5
Multiple responses	**73**	**51**	**36**	**41**	**56**	**88**	**345**
% of responses							
Don't know	11%	4%	11%	10%	34%	19%	16%
DRR comm send specific messages	11%	16%	6%	7%		6%	8%
Family/neighbors help to evacuate	66%	75%	78%	76%	64%	75%	72%
Youth should help them	10%	4%	3%	5%	2%		4%
Misc. other responses	3%	2%	3%	2%			1%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

A high percentage of the suggestions to reduce impact given above are already included in the village DRR plan for the villages in the exit and consolidation phases. Naturally, the percentages are lower in the newer villages (Table IV.3.4).

TABLE IV.3.4 – C/S – # of suggestions for older people in village DRR plans

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
DRR comm send specific messages	8	6	2	2			18
Family/neighbors help to evacuate	34	28	25	13	11	1	112
Others	5	1	2	2			10
Multiple responses	**47**	**35**	**29**	**17**	**11**	**1**	**140**
% of all suggestions							
DRR comm send specific messages	100%	75%	100%	67%			69%
Family/neighbors help to evacuate	71%	74%	89%	42%	31%	2%	45%
Others	56%	33%	100%	67%			56%

Quite a high percentage of respondents (26%) felt it would be difficult to include older persons in DRR management and another 14% did not know how they could be included. A few of the remaining 60% gave two suggestions – with 39% saying older persons could be advisors and 31% suggesting they could be members of committees or task forces.

TABLE IV.3.5 – C/S – How to include older persons in DRR management

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know	6	2	8	8	8	14	46
Difficult to include	23	7	2	2	14	36	84
Can be member comm/TF	27	16	8	9	25	16	101
Should be advisors	24	27	18	21	13	24	127
Multiple responses	**80**	**52**	**36**	**40**	**60**	**90**	**358**
% of respondents who identified older persons as most affected							
Don't know	9%	4%	23%	21%	14%	16%	14%
Difficult to include	35%	15%	6%	5%	25%	42%	26%
Can be member comm/TF	42%	35%	23%	23%	45%	19%	31%
Should be advisors	37%	59%	51%	54%	23%	28%	39%

C/S – Children

The reasons why respondents felt that children were more affected by cyclones/storms were because they could not evacuate quickly (54% of responses) and because they do not pay attention to warnings given (21%). Their low level of knowledge was also noted by some respondents.

TABLE IV.3.6 – C/S – Why children most affected

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know	3		2		2		7
Not pay attention to warnings	4	6	2		11	40	63
Cannot evacuate quickly	34	22	12	15	19	59	161
They have little knowledge	7	4	4	9	10	2	36
Misc others	19	3	4	4		1	31
Multiple responses	**67**	**35**	**24**	**28**	**42**	**102**	**298**
% of responses							
Don't know	4%		8%		5%		2%
Not pay attention to warnings	6%	17%	8%		26%	39%	21%
Cannot evacuate quickly	51%	63%	50%	54%	45%	58%	54%
They have little knowledge	10%	11%	17%	32%	24%	2%	12%
Misc others	28%	9%	17%	14%		1%	10%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Suggestions to reduce the impact on children naturally followed from the main reason given above (difficult to evacuate), with respondents suggesting that family and neighbors should help them. In relation to them not paying attention to warnings, respondents suggest that DRR committee should assign specific persons to give warnings to children. But 13% of respondents did not have any suggestions. The highest percentages of those who had no suggestion were mostly in the new villages but quite a high percentage in the consolidation villages of Pyapon (14%) also did not know how to reduce the impact.

TABLE IV.3.7 – C/S – How to reduce impact on children

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know	2	1	3	3	10	18	37
DRR assign specific person to give warning	10	5		5	3	9	32
Family/neighbors help to evacuate	51	27	19	21	24	71	213
Multiple responses	**63**	**33**	**22**	**29**	**37**	**98**	**282**
% of responses							
Don't know	3%	3%	14%	10%	27%	18%	13%
DRR assign specific person to give warning	16%	15%		17%	8%	9%	11%
Family/neighbors help to evacuate	81%	82%	86%	72%	65%	72%	76%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

While overall 44% of the above suggestions are already included in the village DRR plans, the percentages are much higher for the villages in the exit and consolidation phases.

TABLE IV.3.8 – C/S – # of suggestions for children in village DRR plans

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
DRR assign specific person to give warning	9	4		1			14
Family/neighbors help to evacuate	40	17	19	7	7	3	93
Multiple responses	**49**	**21**	**19**	**8**	**7**	**3**	**107**
% of all suggestions							
DRR assign specific person to give warning	90%	80%		20%			44%
Family/neighbors help to evacuate	78%	63%	100%	33%	29%	4%	44%

A very high percentage of respondents (44%) felt it would be difficult to include children in DRR management and another 18% did not know how they could be included. So less than 40% of respondents suggested they could be included – all suggesting they could be members of committees or task forces.

TABLE IV.3.9 – C/S – How to include children in DRR management

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know	7	5	7	7	9	12	47
Difficult to include	25	6	3	3	10	70	117
Can be member comm/TF	25	19	12	17	17	14	104
Multiple responses	**57**	**30**	**22**	**27**	**36**	**96**	**268**
% of respondents who identified children as most affected							
Don't know	12%	17%	32%	26%	25%	13%	18%
Difficult to include	44%	21%	14%	11%	28%	73%	44%
Can be member comm/TF	44%	66%	55%	63%	47%	15%	39%

C/S – Persons with disabilities

The main reason why respondents felt that persons with disabilities were more affected by cyclones/storms was because of difficulty to evacuate. Another response saying "they can't go by themselves" is similar so the combined total of these responses which relate mostly to mobility of persons with disability is 95%. Only a few respondents mentioned that they may not get warnings.

TABLE IV.3.10 – C/S – Why persons with disabilities most affected

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know	2		2	2	1	2	9
May not receive warning			1			3	4
Difficulto to evacuate	47	30	30	24	29	40	200
They can't go by themselves	12	1	1	2	3	1	20
Multiple responses	**61**	**31**	**34**	**28**	**33**	**46**	**233**
% of responses							
Don't know	3%		6%	7%	3%	4%	4%
May not receive warning			3%			7%	2%
Difficulto to evacuate	77%	97%	88%	86%	88%	87%	86%
They can't go by themselves	20%	3%	3%	7%	9%	2%	9%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Suggestions to reduce the impact on persons with disabilities followed from the main reason given above (difficult to evacuate), with the majority of respondents suggesting that family and neighbors should help them. But quite a high percentage (13%) did not have any suggestions. This percentage was particularly high in NgaPuDaw at 29%.

TABLE IV.3.11 – C/S – How to reduce impact on persons with disabilities

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know	7	2	5		9	7	30
DRR comm send specific messages	5	6	3	3	1	3	21
Family/neighbors help to evacuate	45	28	25	26	21	35	180
Misc. other suggestions	6					1	7
Multiple responses	**63**	**36**	**33**	**29**	**31**	**46**	**238**
% of responses							
Don't know	11%	6%	15%		29%	15%	13%
DRR comm send specific messages	8%	17%	9%	10%	3%	7%	9%
Family/neighbors help to evacuate	71%	78%	76%	90%	68%	76%	76%
Misc. other suggestions	10%					2%	3%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

As for older people and children, a high percentage of the above suggestions are already included in the village DRR plans in the exit and consolidation villages but less so in the new villages.

TABLE IV.3.12 – C/S – # of suggestions for persons with disabilities in village DRR plans

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
DRR comm send specific messages	4	5	3	2			14
Family/neighbors help to evacuate	35	18	22	11	7	3	96
Others	5						5
	44	**23**	**25**	**13**	**7**	**3**	**115**
% of all suggestions							
DRR comm send specific messages	80%	83%	100%	67%			67%
Family/neighbors help to evacuate	78%	64%	88%	42%	33%	9%	53%
Others	83%						71%

A very high percentage of respondents (36%) felt it would be difficult to include persons with disabilities in DRR management and another 16% did not know how they could be included. So less than 50% of respondents suggested they could be included – with 39% suggesting they could be members of committees or task forces and 17% suggesting they could be advisors.

TABLE IV.3.13 – C/S – How to include persons with disabilities in DRR management

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know	6	4	4	4	8	10	36
Difficult to include	21	8	10	10	3	27	79
Can be member comm/TF	28	17	9	10	17	5	86
Should be advisors	14	2	9	5	4	3	37
Multiple responses	**69**	**31**	**32**	**29**	**32**	**45**	**238**
% of respondents who idetified persons with disabilities as affected persons							
Don't know	11%	13%	13%	14%	26%	23%	16%
Difficult to include	37%	27%	31%	36%	10%	61%	36%
Can be member comm/TF	49%	57%	28%	36%	55%	11%	39%
Should be advisors	25%	7%	28%	18%	13%	7%	17%

3.2 Floods

As analysis of vulnerable groups was only asked about the first main hazard identified by the respondents, the responses do not include the few respondents from Labutta who named flood as their second hazard (there were none who named it as their first). So data was available from only three townships – Pyapon, NgaPuDaw and Sittwe.

Similar to respondents to cyclones/storms, the majority of respondents identified older persons as most affected by cyclones/storms, followed by children and persons with disabilities (Table IV.3.14). Only 5% of respondents mentioned women and 8% poor households.

TABLE IV.3.14 – Floods– Most affected groups

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
None/don't know			1		2	4	7
Older persons			6	4	4	6	20
Children			4		3	8	15
Persons with disabilities			5	1	4	3	13
Women				1	1	2	4
Families in remote areas			3		2	3	8
Poor HHs			3	1	1	1	6
Fishing communities			2				2
Multiple responses			**24**	**7**	**17**	**27**	**75**
% of all Flood affected HHs							
None/don't know			4%		12%	15%	9%
Older persons			25%	57%	24%	22%	27%
Children			17%		18%	30%	20%
Persons with disabilities			21%	14%	24%	11%	17%
Women				14%	6%	7%	5%
Families in remote areas			13%		12%	11%	11%
Poor HHs			13%	14%	6%	4%	8%
Fishing communities			8%				3%

The analysis of responses regarding why these groups are most affected, what they community can do and attitudes about inclusion is discussed below for the three main groups they identified – older persons, children and persons with disabilities. Responses in relation to other affected groups were too low to draw any general conclusions.

Floods – Older persons

Nineteen out of the 20 respondents that identified older persons as most affected said the reason was because they could not evacuate to safe place as easily as other people, with only one response saying it was because they may not receive warnings.

TABLE IV.3.15 – Floods – Why older persons most affected

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Not receive warning						1	1
Not able to evacuate			6	4	4	5	19
Multiple responses			**6**	**4**	**4**	**6**	**20**

Four of the respondents could not give any suggestions about how to reduce the impact on these older persons, with the other 16 respondents saying that family and neighbors should help them to evacuate.

TABLE IV.3.16 – Floods – How to reduce impact on older persons

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know				1	2	1	4
Family/neighbors help to evacuate			6	3	2	5	16
			6	**4**	**4**	**6**	**20**

Of the suggestions above, eight respondents (50%) say these have been included in the village DRR plans – 100% for NgaPuDaw.

TABLE IV.3.17 – Floods – # of suggestions for older people in village DRR plans

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Family/neighbors help to evacuate			4	1	2	1	8
% of suggestions							
Family/neighbors help to evacuate			67%	33%	100%	20%	50%

Of the 20 respondents to this issue, four of them felt it would be difficult to include older persons in DRR management, with two persons saying they did not know how. The positive responses were mainly that should be advisors.

TABLE IV.3.18 – Floods – How to include older persons in DRR management

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know			2				2
Difficult to include			1	1	1	1	4
Can be member comm/TF			1		1	2	4
Should be advisors			2	3	2	4	11
Multiple responses			**6**	**4**	**4**	**7**	**21**

Floods – Children

Of the 15 respondents who identified children as most affected by floods, only one person did not know why. Nine of the other 14 respondents said children were more affected because they could not evacuate quickly with the other five saying the reason was that they do not pay attention to warnings.

TABLE IV.3.19 – Floods – Why children most affected

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know						1	1
Not pay attention to warnings			3		1	1	5
Cannot evacuate quickly			1		2	6	9
			4		**3**	**8**	**15**

Suggestions to reduce the impact on children were related to the reasons given above with respondents suggesting that family and neighbors should help them to evacuate and that DRR committees should assign specific persons to make sure children receive the warnings.

TABLE IV.3.20 – Floods – How to reduce impact on children

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know					2	1	3
DRR assign specific person to give warning						1	1
Family/neighbors help to evacuate			4		1	6	11
Multiple responses			**4**		**3**	**8**	**15**

Of the suggestions from the 12 respondents above, only (some of) those related to family/neighbors helping to evacuate are already in the village DRR plans – 100% for both Pyapon and NgaPuDaw but only one of the six said yes for Sittwe.

TABLE IV.3.21 – Floods – # of suggestions for children in village DRR plans

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Family/neighbors help to evacuate			4		1	1	6
% of suggestions							
Family/neighbors help to evacuate			100%		100%	17%	55%

Over half of the 15 respondents either said it was difficult to include children in DRR management or did not know how to include. Only 7 persons felt they could be members of committees or task forces.

TABLE IV.3.22 – Floods – How to include children in DRR management

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know			1			1	2
Difficult to include			2		1	3	6
Can be member comm/TF			1		2	4	7
Multiple responses			**4**		**3**	**8**	**15**

Floods – Persons with disabilities

All 13 respondents who identified persons with disabilities as particularly affected by floods said the reason was their difficulty during evacuation.

TABLE IV.3.23 – Floods – Why persons with disabilities most affected

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Difficulto to evacuate			5	1	4	3	13

In order to reduce impact on these persons with disabilities, 10 of the 13 respondents suggested that family and neighbors should help to evacuate them, with one of these 10 adding that they could also be members of committees or task forces.

TABLE IV.3.24 – Floods – How to reduce impact on persons with disabilities

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know			1		2		3
DRR comm send specific messages						1	1
Family/neighbors help to evacuate			4	1	2	3	10
Multiple responses			**5**	**1**	**4**	**4**	**14**

Respondents from all areas except Sittwe said their plans had been included in the village DRR plan. for Sittwe, none had yet been included.

TABLE IV.3.25 – Floods – # of suggestions for persons with disabilities in village DRR plans

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Family/neighbors help to evacuate			4	1	2		7
% of suggestions							
Family/neighbors help to evacuate			100%	100%	100%		70%

Over half of the 13 respondents either said it was difficult to include children in DRR management or did not know how to include. Only 7 persons felt they could be members of committees/task forces or advisors to these.

TABLE IV.3.26 – Floods – How to include persons with disabilities in DRR management

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know			1			1	2
Difficult to include			2		3		5
Can be member comm/TF			1	1	1	1	4
Should be advisors			2			1	3
Multiple responses			**6**	**1**	**4**	**3**	**14**

3.3 Fire

As noted in the previous section, fire was ranked as the number one hazard mainly in Sittwe, with only one other respondent (in NgaPuDaw) also ranking fire their first hazard. A total of 23 respondents from Sittwe is only just over 10% of all respondents from this township so caution should be applied when interpreting the responses as representative of this township.

All 23 respondents identified older persons as most affected by fires, with 13 of them also mentioning children and persons with disabilities (Table IV.3.27). Only a few respondents mentioned women, poor households or families in remote areas.

TABLE IV.3.27 – Fire– Most affected groups

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
None/don't know						2	2
Older persons					1	22	23
Children						13	13
Persons with disabilities						13	13
Women						4	4
Families in remote areas						2	2
Poor HHs						6	6
Multiple responses					**1**	**62**	**63**

The analysis of responses regarding why these groups are most affected, what they community can do and attitudes about inclusion is discussed below for the three main groups they identified – older persons, children and persons with disabilities.

Fire – Older persons

All respondents felt that the main reason why older persons were more affected by fires was because they were not able to evacuate [quickly], with two respondents also adding that they may not receive the warnings.

TABLE IV.3.28 – Fire – Why older persons most affected

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Not receive warning						2	2
Not able to evacuate					1	22	23
Multiple responses					**1**	**24**	**25**

The main suggestion to reduce the impact on these older persons was for family/neighbors to help them to evacuate. A few respondents added that the DRR committee should make sure they receive specific messages.

TABLE IV.3.29 – Fire – How to reduce impact on older persons

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know						2	2
DRR comm send specific messages						3	3
Family/neighbors help to evacuate						20	20
Multiple responses						**25**	**25**

Only one of the above suggestions has already been included in the village DRR plans.

TABLE IV.3.30 – Fire – # of suggestions for older people in village DRR plans

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
DRR comm send specific messages						1	1
Family/neighbors help to evacuate							
						1	**1**

Almost half of the 23 respondents either said it was difficult to include older persons in DRR management or did not know how to include. Of the 12 persons who answered positively, nine felt they could be members of committees/task forces and three said they should be advisors to these.

TABLE IV.3.31 – Fire – How to include older persons in DRR management

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know						7	7
Difficult to include					1	3	4
Can be member comm/TF						9	9
Should be advisors						3	3
					1	**22**	**23**

Fire – Children

Of the 13 respondents who identified children as being one of the most affected groups regarding fires, most of them said this was because they cannot evacuate quickly. Other reasons given were that they don't pay attention to warnings or they have little knowledge.

TABLE IV.3.32 – Fire – Why children most affected

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know						1	1
Not pay attention to warnings						2	2
Cannot evacuate quickly						10	10
They have little knowledge						1	1
Multiple responses						**14**	**14**

Suggestions to reduce the impact on children were related to the reasons given above with respondents suggesting that family and neighbors should help them to evacuate and that DRR committees should assign specific persons to make sure children receive the warnings. None of the above suggestions have yet been included in the village DRR plans.

TABLE IV.3.33 – Fire – How to reduce impact on children

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know						3	3
DRR assign specific person to give wa						4	4
Family/neighbors help to evacuate						8	8
Multiple responses						**15**	**15**

Less than half of the respondents (6 out of 13) felt children could be members of DRR committees or task forces. The others said either it would be difficult to include or they did not know how to include.

TABLE IV.3.34 – Fire – How to include children in DRR management

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know						2	2
Difficult to include						5	5
Can be member comm/TF						6	6
						13	**13**

Fire – Persons with disabilities

All 13 respondents (from Sittwe) to this question said that the main reason why persons with disabilities were particularly affected by fires was because they had difficulty to evacuate.

Suggestions to reduce the impact on these persons included family/neighbors helping them with evacuation, DRR committee sending them specific messages and also collecting data about them. None of these suggestions was yet included in the village DRR plans.

TABLE IV.3.35 – Fire – How to reduce impact on persons with disabilities

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know						1	1
DRR comm send specific messages						6	6
Family/neighbors help to evacuate						7	7
Collect data about them						1	1
Multiple responses						**15**	**15**

Less than 40% of the respondents (5 out of 13) felt persons with disabilities could be members of DRR committees or task forces. The others said it would be difficult to include.

TABLE IV.3.36 – Fire – How to include persons with disabilities in DRR management

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Difficult to include						8	8
Can be member comm/TF						3	3
Should be advisors						2	2
Multiple responses						**13**	**13**

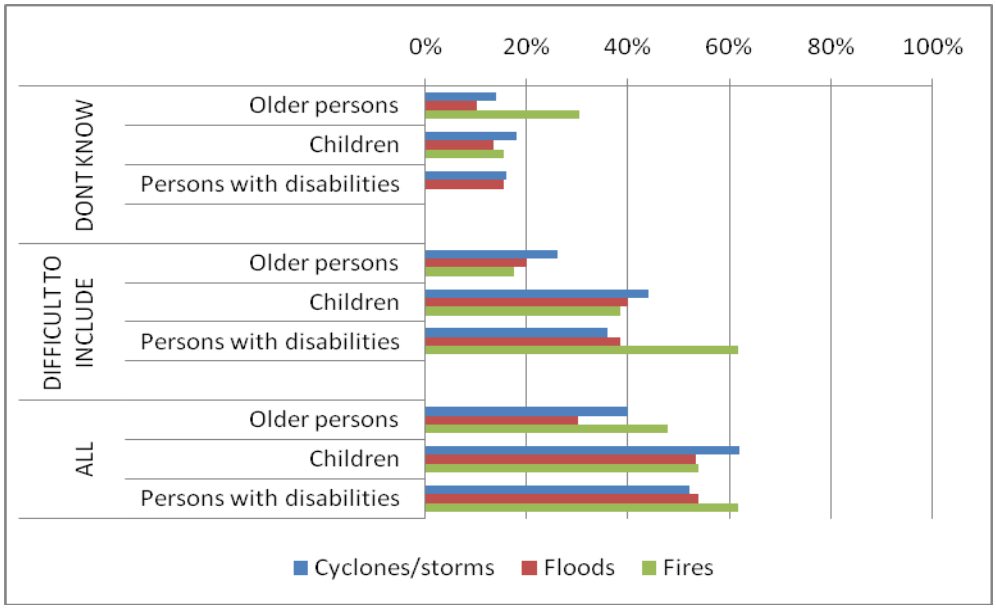
Summary of key points on Vulnerability

For all of the three main hazard analyzed (cyclones/storms, floods and fires), the groups identified by respondents as most affected in all cases were older persons, children and persons with disabilities. Relatively few respondents mentioned women or poor households.

The main reason given in most cases was difficulty with evacuation, with only a few respondents raising other issues such as difficulty in receiving early warnings. Considering problems with evacuation were the main cause noted by the respondents, their suggestions for reducing impact also related to this issue and their main suggestion was that family and neighbors should help these vulnerable groups during evacuation. Related to issues of receiving warnings, there were some suggestions that DRR committees should assign specific persons to ensure these vulnerable groups receive warnings. A high percentage (from 70 to 100) of the respondents suggestions are already included in the village DRR plans for exit and consolidation villages but not so many yet in the new villages.

Attitudes of respondents towards the inclusion of these vulnerable groups in DRR management received positive responses of only about 50% on average among these three hazards. The others either felt that it would be difficult to include or they had no idea how to include – these percentages are summarized in Chart IV.3.2 below.

CHART IV.3.2 – % of respondents who say difficult to include (or don't know how)



IV.4 Early Warning and Planning

Just over 50% of the respondents said that their communities have early warning systems (Table IV.4.1). As would be expected the percentages were much higher in the exit and consolidation villages than the new villages. This is highlighted in Chart IV.4.1 below.

TABLE IV.4.1 – Community has Early Warning System

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By intervention			
Intervention level	Exit	Consol	Consol	New	New	New		Exit	Consol	New	Total
Yes	69	53	56	31	50	55	314	69	109	136	314
No	4	7	9	24	72	146	262	4	16	242	262
Don't know	3	6	3	5	4	14	35	3	9	23	35
	76	**66**	**68**	**60**	**126**	**215**	**611**	**76**	**134**	**401**	**611**
%'s											
Yes	91%	80%	82%	52%	40%	26%	51%	91%	81%	34%	51%
No	5%	11%	13%	40%	57%	68%	43%	5%	12%	60%	43%
Don't know	4%	9%	4%	8%	3%	7%	6%	4%	7%	6%	6%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

CHART IV.4.1 – Comparison of communities who have EWS (% of respondents)

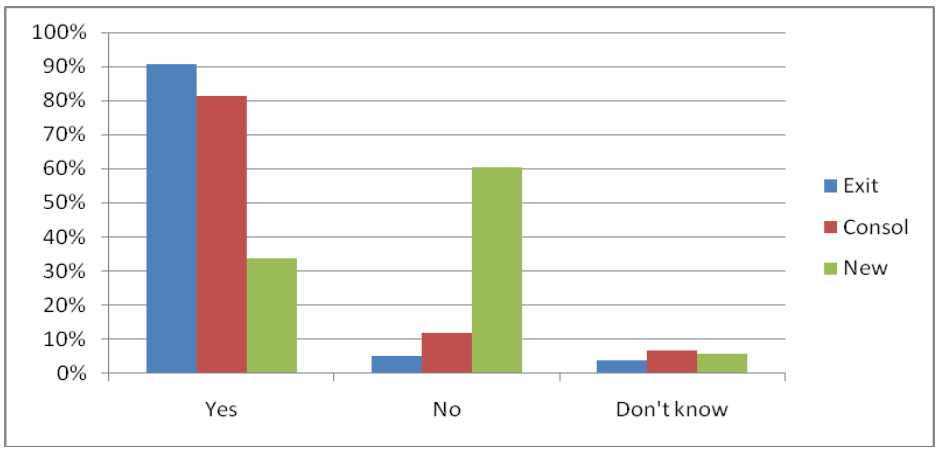


Table IV.4.2 below shows that the main EWSs are for cyclones/storms and floods.

TABLE IV.4.2 – Hazards for which community has EWS

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By intervention			
Intervention level	Exit	Consol	Consol	New	New	New		Exit	Consol	New	Total
Don't know	1		1	3	2		7	1	1	5	7
Cyclone/strong storm	66	52	50	26	45	54	293	66	102	125	293
Flood	17	5	31	8	12	18	91	17	36	38	91
Tsunami	13					1	14	13		1	14
Earthquake	7	1	2	1	2		13	7	3	3	13
Fire	3			2	3	3	11	3		8	11
Tornado/wind funnel	1					1	2	1		1	2
Multiple responses	**108**	**58**	**84**	**40**	**64**	**77**	**431**	**108**	**142**	**181**	**431**
% of respondents who have EWSs											
Don't know	1%		2%	10%	4%		2%	1%	1%	4%	2%
Cyclone/strong storm	96%	98%	89%	84%	90%	98%	93%	96%	94%	92%	93%
Flood	25%	9%	55%	26%	24%	33%	29%	25%	33%	28%	29%
Tsunami	19%					2%	4%	19%		1%	4%
Earthquake	10%	2%	4%	3%	4%		4%	10%	3%	2%	4%
Fire	4%			6%	6%	5%	4%	4%		6%	4%
Tornado/wind funnel	1%					2%	1%	1%		1%	1%

The most common means of giving warnings are through alarms (gong, loudspeaker or siren). Next was the use of flags or signboards. Other means were less frequently mentioned by respondents.

TABLE IV.4.3 – How are warnings given

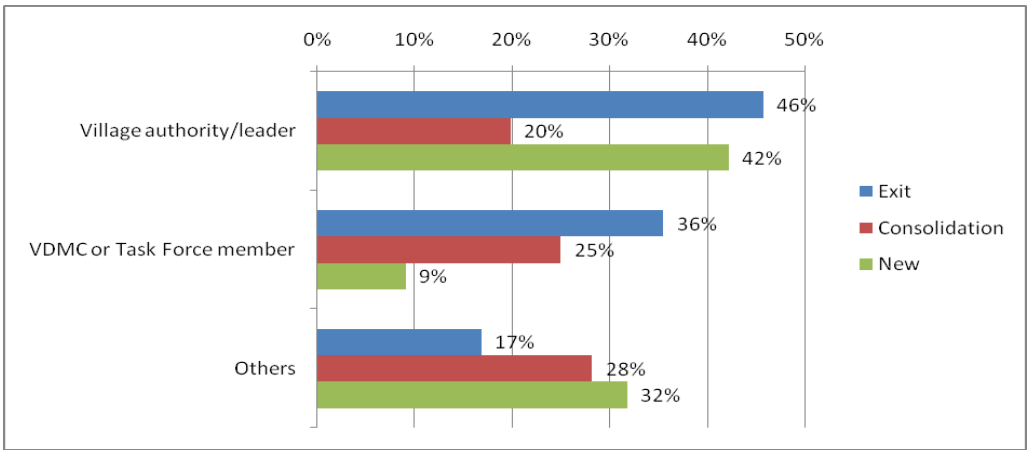
Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know	1		1		2		4
Alarm (gong, loudspeaker, siren)	62	50	43	15	29	35	234
Flags/signboards	20	12	11	13	23	24	103
Radio	22	3	4	6	5	6	46
Word of mouth/house to house	8	9	7	7	8	1	40
Phone	6	1	2		3	1	13
TV	1	1	1	1	3	5	12
Hold meeting	1						1
	121	**76**	**69**	**42**	**73**	**72**	**453**
% of responses							
Don't know	1%		1%		3%		1%
Alarm (gong, loudspeaker, siren)	51%	66%	62%	36%	40%	49%	52%
Flags/signboards	17%	16%	16%	31%	32%	33%	23%
Radio	18%	4%	6%	14%	7%	8%	10%
Word of mouth/house to house	7%	12%	10%	17%	11%	1%	9%
Phone	5%	1%	3%		4%	1%	3%
TV	1%	1%	1%	2%	4%	7%	3%
Hold meeting	1%						0%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Overall, warnings are most often given by the village authorities/leaders (Table IV.4.4). But there are higher responses for warnings given by VDMCs or Task Force members in the exit and consolidation villages than the new ones. (Chart IV.4.2).

TABLE IV.4.4 – Who gives the warnings

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know	2		3		4		9
Village authority/leader	49	25	6	2	26	37	145
VDMC member	25	29	10	2	1	11	78
Task Force member	13	16	23	16		6	74
Other village volunteer	13	10	9	3	12	5	52
Religious leaders	4	3	19	10	3	1	40
Neighbors		2		1	7		10
Government authority/official	1		1		3	4	9
	107	**85**	**71**	**34**	**56**	**64**	**417**
% of reponses							
Don't know	2%		4%		7%		2%
Village authority/leader	46%	29%	8%	6%	46%	58%	35%
VDMC member	23%	34%	14%	6%	2%	17%	19%
Task Force member	12%	19%	32%	47%		9%	18%
Other village volunteer	12%	12%	13%	9%	21%	8%	12%
Religious leaders	4%	4%	27%	29%	5%	2%	10%
Neighbors		2%		3%	13%		2%
Government authority/official	1%		1%		5%	6%	2%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

CHART IV.4.2 – Comparison by intervention who gives warnings (% of respondents)



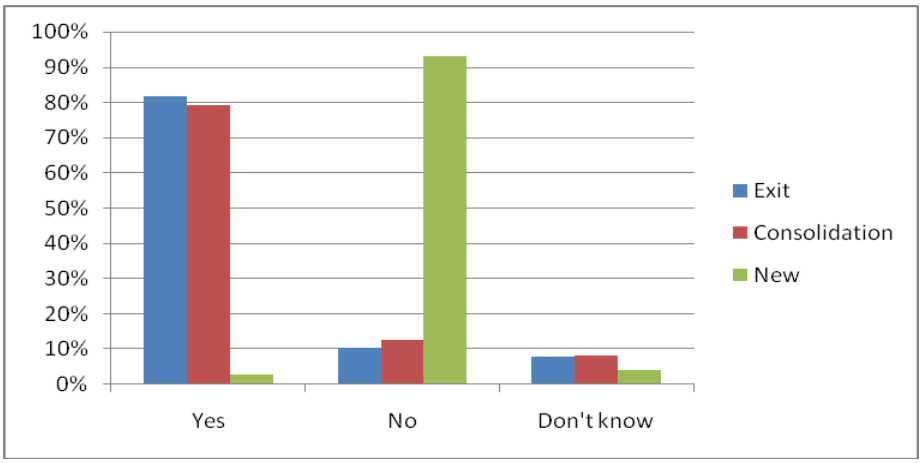
Simulations/drills

While there were generally high responses above to the existence of early warning systems, less than 30% of respondents overall said their community had done simulations or drills in relation to any possible hazards. However, the responses differ considerably per township, and especially per intervention phase, with much higher percentages in exit and consolidation villages. These are highlighted in Chart IV.4.3 below.

TABLE IV.4.5 – Community has done simulation or drill

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By intervention			
Intervention level	Exit	Consol	Consol	New	New	New		Exit	Consol	New	Total
Yes	62	45	61	9	1	1	179	62	106	11	179
No	8	14	3	45	123	205	398	8	17	373	398
Don't know	6	7	4	6	2	9	34	6	11	17	34
	76	**66**	**68**	**60**	**126**	**215**	**611**	**76**	**134**	**401**	**611**
%'s											
Yes	82%	68%	90%	15%	1%	0%	29%	82%	79%	3%	29%
No	11%	21%	4%	75%	98%	95%	65%	11%	13%	93%	65%
Don't know	8%	11%	6%	10%	2%	4%	6%	8%	8%	4%	6%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

CHART IV.4.3 – Comparison by intervention communities who have done simulations/drills (% of respondents)



Simulations/drills done were almost exclusively for cyclones/storms. Responses to other hazards were minimal.

TABLE IV.4.6 – Simulations/drills for which hazards

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Cyclone/strong storm	59	45	57	4	1	1	167
Flood	1	1	2	4		1	9
Fire						1	1
Don't know	2		4	3			9
	62	**46**	**63**	**11**	**1**	**3**	**186**
%'s							
Cyclone/strong storm	95%	98%	90%	36%	100%	33%	90%
Flood	2%	2%	3%	36%		33%	5%
Fire						33%	1%
Don't know	3%		6%	27%			5%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Only about one-third of the respondents had actually participated in any of the simulations/drills. But a slightly higher percentage of female respondents had participated than males.

TABLE IV.4.7 – Respondents who participated in simulations/drills

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By gender	
Intervention level	Exit	Consol	Consol	New	New	New		Male	Female
Yes	19	12	23	2	1	1	58	24	34
No	41	33	34	4			112	58	54
	60	**45**	**57**	**6**	**1**	**1**	**170**	**82**	**88**
%'s									
Yes	32%	27%	40%	33%	100%	100%	34%	29%	39%
No	68%	73%	60%	67%			66%	71%	61%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

The majority of those who participated in simulations and drills were very positive about them, saying that they now understand better what to do in the case of a hazard event occurring. Only two respondents (both female) said they were not really helpful.

TABLE IV.4.8 – Usefulness of participation in simulations/drills

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By gender	
Intervention level	Exit	Consol	Consol	New	New	New		Male	Female
No/not really helpful	1		1				2		2
I now understand better what to do	18	12	21	2		1	54	23	31
Don't know			1		1		2	1	1
	19	**12**	**23**	**2**	**1**	**1**	**58**	**24**	**34**
%'s									
No/not really helpful	5%		4%				3%		6%
I now understand better what to do	95%	100%	91%	100%		100%	93%	96%	91%
Don't know			4%		100%		3%	4%	3%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

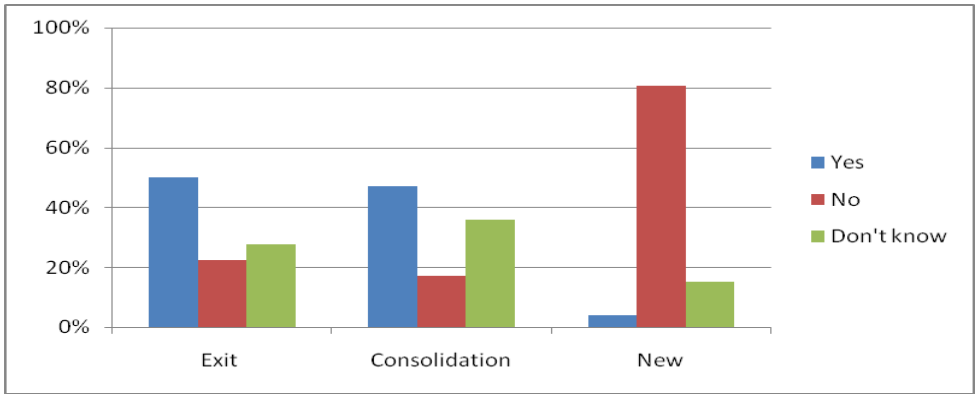
Planning

Only 19% of respondents overall said that their community had a plan related to natural hazards or disasters (Table IV.4.9). But within this figure, the percentage for villages in the exit and consolidation phases was about 50% whereas the percentage was closer to zero for many of the new areas (Chart IV.4.4).

TABLE IV.4.9 – Community has DM plan (# and % of respondents)

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By intervention			
Intervention level	Exit	Consol	Consol	New	New	New		Exit	Consol	New	Total
Yes	38	31	32	13	2	1	117	38	63	16	117
No	17	8	15	33	106	185	364	17	23	324	364
Don't know	21	27	21	14	18	29	130	21	48	61	130
	76	**66**	**68**	**60**	**126**	**215**	**611**	**76**	**134**	**401**	**611**
%'s											
Yes	50%	47%	47%	22%	2%	0%	19%	50%	47%	4%	19%
No	22%	12%	22%	55%	84%	86%	60%	22%	17%	81%	60%
Don't know	28%	41%	31%	23%	14%	13%	21%	28%	36%	15%	21%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

CHART IV.4.4 – % of respondents whose communities have DM plan



Almost one-third of the respondents to this survey whose village had a DM plan participated in their community's planning process. More females had participated (38% compared to 23% males.

TABLE IV.4.10 – Respondents participated in the planning process

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By gender	
Intervention level	Exit	Consol	Consol	New	New	New		Male	Female
Yes	12	7	8	8	1		36	12	24
No	26	24	24	5	1	1	81	41	40
	38	**31**	**32**	**13**	**2**	**1**	**117**	**53**	**64**
%'s									
Yes	32%	23%	25%	62%	50%		31%	23%	38%
No	68%	77%	75%	38%	50%	100%	69%	77%	63%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Almost 90% of respondents felt the plan was helpful to their household or community, with only four respondents saying no.

TABLE IV.4.11 – The plan was helpful to the respondents' HH or community

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By gender	
Intervention level	Exit	Consol	Consol	New	New	New		Male	Female
Yes	11	6	8	7			32	11	21
No	1	1		1	1		4	1	3
	12	**7**	**8**	**8**	**1**		**36**	**12**	**24**
%'s									
Yes	92%	86%	100%	88%			89%	92%	88%
No	8%	14%		13%	100%		11%	8%	13%
	100%	**100%**	**100%**	**100%**	**100%**		**100%**	**100%**	**100%**

While a few of those who participated in the planning (7 out of the 36 respondents) did not know what the plan included, the others could give one or two examples. The activities most frequently mentioned were preparedness, early warning and vulnerability/hazard assessment. But interestingly, no respondents in the exit villages of Labutta mentioned vulnerability/hazard assessments.

TABLE IV.4.12 – What the DM plan includes

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Preparedness	6	4	6	3			19
Early warning	4	4	2	4			14
Vulnerability/hazard assessment		3	2	3			8
Risk reduction/mitigation	3	2	1				6
Evacuation	2	4					6
Response/relief		1	2	1			4
Recovery				1			1
Don't know	3	2	1		1		7
	18	**20**	**14**	**12**	**1**		**65**
% of respondents who were involved in the planning							
Preparedness	50%	57%	75%	38%			53%
Early warning	33%	57%	25%	50%			39%
Vulnerability/hazard assessment		43%	25%	38%			22%
Risk reduction/mitigation	25%	29%	13%				17%
Evacuation	17%	57%					17%
Response/relief		14%	25%	13%			11%
Recovery				13%			3%
Don't know	25%	29%	13%		100%		19%

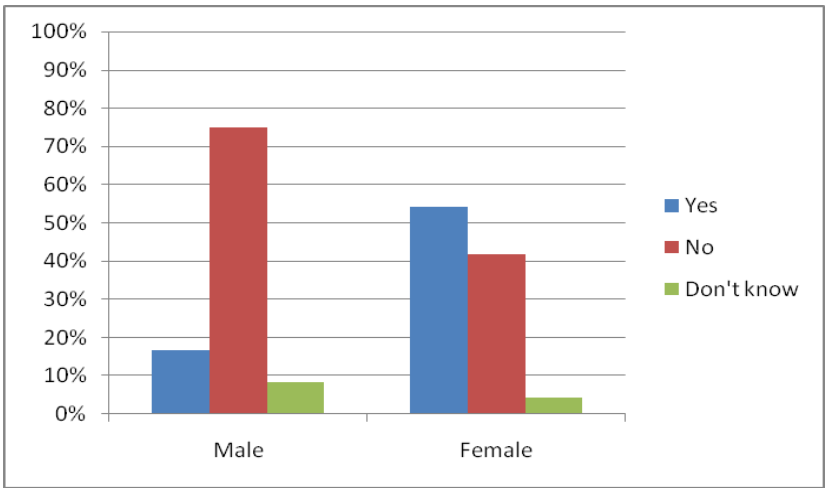
As the responses to the above question about contents of community DM plans were given by only about 5% of all respondents, caution should be exercised in generalizing the content of all DM plans from these responses (likewise with the next question about adequate participation).

Only 42% of those who participated in the planning process felt there was adequate participation from the community (Table IV.4.13). The percentage was particularly low in the new villages of Pyapon, where only one person out of 8 felt that participation was adequate. Comparison by gender shows that more females felt participation was adequate than males (Chart IV.4.5).

TABLE IV.4.13 – Adequate participation in the planning process

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By intervention			
Intervention level	Exit	Consol	Consol	New	New	New		Exit	Consol	New	Total
Yes	6	4	4	1			15	6	8	1	15
No	6	3	3	6	1		19	6	6	7	19
Don't know			1	1			2		1	1	2
	12	**7**	**8**	**8**	**1**		**36**	**12**	**15**	**9**	**36**
%'s											
Yes	50%	57%	50%	13%			42%	50%	53%	11%	42%
No	50%	43%	38%	75%	100%		53%	50%	40%	78%	53%
Don't know			13%	13%			6%		7%	11%	6%
	100%	**100%**	**100%**	**100%**	**100%**		**100%**	**100%**	**100%**	**100%**	**100%**

CHART IV.4.5 – % of respondents who felt participation in planning was adequate



Summary of key points on Early Warning & Planning

- Early warning systems were said to be in place in the communities of about 50% of respondents. But the responses were between 80-90% for exit and consolidation villages and almost non-existent in new villages.
- The EWSs were mostly for cyclones/storms and floods, very little for other hazards. The most common means reported for giving warnings was by alarm (loudspeakers/sirens etc.), followed by flags/signboards. The warnings were most often given by the village authorities but in the exit and consolidation villages, more respondents mentioned the VDMCs and Task Force members as the ones to give the warning.
- Less than 30% of respondents said their community had conducted a simulation or drill for any hazard. But the percentage in exit and consolidation villages was over 90% and new villages almost zero. The simulations/drills were almost exclusively carried out for cyclones/storms.
- Of the respondents whose communities had conducted such simulations, one third of the respondents to the survey had participated in these and over 90% said they were useful to them.
- Only 19% of respondents said that their communities had a DM plan. But the percentage was approximately 50% in the exit and consolidation villages. About one third of the respondents whose villages had a plan had personally participated in the planning process and almost 90% of them said the plan was helpful to their household or community. The main contents of the plan as reported by these respondents who participated were preparedness measures, early warning and vulnerability/ hazard assessments.
- Only 42% overall said there was adequate participation in the planning process and the percentage was much lower in the new villages of Pyapon.

IV.5 Preparedness & Response

In response to what their household has done to prepare for an emergency situation, a large percentage of respondents (36%) could not give any answer. Of those who did, most respondents only mentioned one or two measures, with only a few respondents saying they had carried out three or more preparedness measures. Table IV.5.1 below summarizes the responses given to what their HHs have done to prepare for such situations.

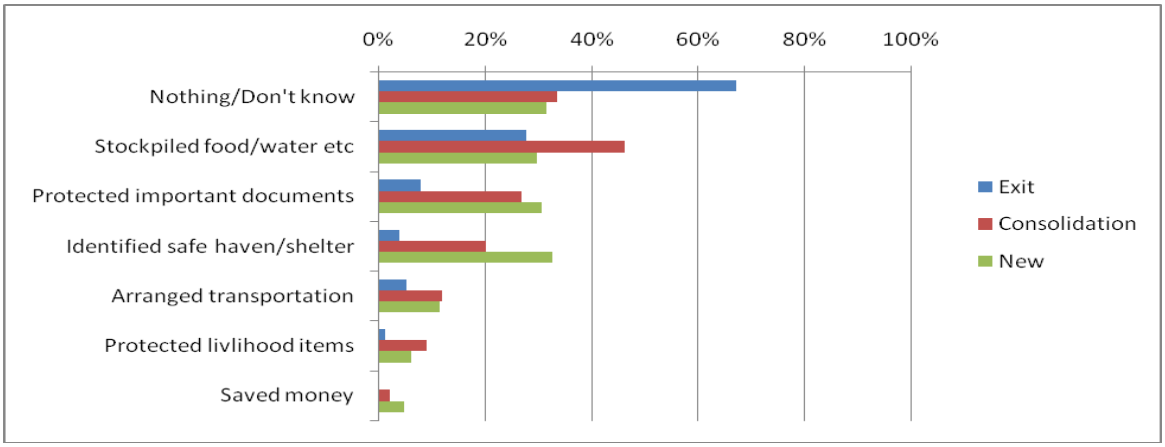
TABLE IV.5.1 – What HHs have done to prepare for emergency situation

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total	By intervention			
Intervention level	Exit	Consol	Consol	New	New	New		Exit	Consol	New	Total
Nothing/Don't know	51	33	12	11	80	35	222	51	45	126	222
Stockpiled food/water etc	21	23	39	29	22	68	202	21	62	119	202
Protected important documents	6	18	18	9	5	109	165	6	36	123	165
Identified safe haven/shelter	3	14	13	10	24	97	161	3	27	131	161
Arranged transportation	4	4	12	12	7	27	66	4	16	46	66
Protected livlihood items	1	6	6	2	2	21	38	1	12	25	38
Saved money		2	1	1	1	17	22		3	19	22
Total responses	**86**	**100**	**101**	**74**	**141**	**374**	**876**	**86**	**201**	**589**	**876**
Average # measures per resp.	**1.13**	**1.52**	**1.49**	**1.23**	**1.12**	**1.74**	**1.43**	**1.13**	**1.50**	**1.47**	**1.43**
% of all respondents											
Nothing/Don't know	67%	50%	18%	18%	63%	16%	36%	67%	34%	31%	36%
Stockpiled food/water etc	28%	35%	57%	48%	17%	32%	33%	28%	46%	30%	33%
Protected important documents	8%	27%	26%	15%	4%	51%	27%	8%	27%	31%	27%
Identified safe haven/shelter	4%	21%	19%	17%	19%	45%	26%	4%	20%	33%	26%
Arranged transportation	5%	6%	18%	20%	6%	13%	11%	5%	12%	11%	11%
Protected livlihood items	1%	9%	9%	3%	2%	10%	6%	1%	9%	6%	6%
Saved money		3%	1%	2%	1%	8%	4%		2%	5%	4%

The table above shows that on average respondents in the exit villages had undertaken fewer measures per household to prepare than those in the consolidation or new villages. Although the overall average of respondents whose HH have done nothing to prepare (or don't know) is 36%, the figure is surprisingly high for the exit area of Labutta (67% of HHs have not taken any preparedness measures). A comparison between the responses per intervention phase is shown in Chart IV.5.1 below.

Among the respondents whose HHs have taken measures, the most frequently reported was stockpiling food and water. The next most frequent response was protecting important documents but only 27% of all HHs have taken this important measure. Indentifying safe areas received a similar percentage of responses. Other measures were taken by only a very low percentage of the HHs of respondents.

CHART IV.5.1 – What HHs have done to prepare for emergency situation (by intervention phase, % of respondents)



Response

Respondents were asked what they would do if the hazard they identified as the one which has had greatest impact was about to strike their community. The responses are presented below for the three most important hazard identified (refer Table IV.2.2 above).

TABLE IV.5.2 – Examples of what HH would do if a CYCLONE/STORM about to strike

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know	2	2	3	4	9	20	40
Help to evacuate	38	35	29	25	54	70	251
Stockpile food/water/materials	49	25	27	26	35	49	211
Protected important documents	17	18	7	6	18	43	109
Stay together with children/family	8	1	5	5	4	18	41
Strengthen house			1	5	7	27	40
Remind others in community	4	10	3	5	9	2	33
Protect livelihoods items	1	1	2	7	2	2	15
Pre-arranged transportation	8		1	4			13
Help vulnerable people	5	3			4	1	13
Listening to the radio continuously	4	2			3		9
Take vulnerable people		2	1	1	1		5
Build safer houses				1			1
Stay on the tree (tied)				1			1
	136	**99**	**79**	**90**	**146**	**232**	**782**

% of Resp who identified Cyclone/storm as H1

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know	3%	3%	6%	7%	9%	13%	8%
Help to evacuate	52%	56%	55%	45%	55%	47%	51%
Stockpile food/water/materials	67%	40%	51%	47%	35%	33%	43%
Protected important documents	23%	29%	13%	11%	18%	29%	22%
Stay together with children/family	11%	2%	9%	9%	4%	12%	8%
Strengthen house			2%	9%	7%	18%	8%
Remind others in community	5%	16%	6%	9%	9%	1%	7%
Protect livelihoods items	1%	2%	4%	13%	2%	1%	3%
Pre-arranged transportation	11%		2%	7%			3%
Help vulnerable people	7%	5%			4%	1%	3%
Listening to the radio continuously	5%	3%			3%		2%
Take vulnerable people		3%	2%	2%	1%		1%
Build safer houses				2%			0%
Stay on the tree (tied)				2%			0%

The responses above show that most respondents put evacuation high on the list of things they would do if and when a warning was received about an impending cyclone/storm. They do not say running to a safe place, but “help to evacuate” which means they think of others as well as themselves.

As for preparation measures mentioned at the end of the last chapter, stockpiling food and water was considered the top priority after evacuation. Protecting important document is still mentioned by a number of respondents (but only 22% of all respondents). Other measures were only mentioned by few respondents.

TABLE IV.5.3 – Examples of what HH would do if a FLOOD about to strike

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know			1			3	4
Help to evacuate			9	1	5	7	22
Stockpile food/water/materials			6	2	4	2	14
Protected important documents			2		1	3	6
Stay together with children/family			3	1		1	5
Remind others in community			2	1	1		4
Take vulnerable people			1	1		1	3
Strengthen house			1			1	2
Help vulnerable people					1	1	2
Pre-arranged transportation				1			1
Protect livelihoods items				1			1
			25	8	12	19	64

% of Resp who identified Flood as H1

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know			7%			19%	9%
Help to evacuate			60%	25%	63%	44%	51%
Stockpile food/water/materials			40%	50%	50%	13%	33%
Protected important documents			13%		13%	19%	14%
Stay together with children/family			20%	25%		6%	12%
Remind others in community			13%	25%	13%		9%
Take vulnerable people			7%	25%		6%	7%
Strengthen house			7%			6%	5%
Help vulnerable people					13%	6%	5%
Pre-arranged transportation				25%			2%
Protect livelihoods items				25%			2%

Responses to flood are similar to cyclones/storms in that the majority of respondents mentioned assisting with evacuation, followed by stockpiling food/water and then protecting important documents (but only a few respondents mentioned this one).

TABLE IV.5.4 – Examples of what HH would do if a FLOOD about to strike

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know						7	7
Stockpile food/water/materials						14	14
Help to evacuate					1	13	14
Protected important documents						6	6
Stay together with children/family						4	4
Strengthen house						1	1
					1	45	46

% of Resp who identified Fire as H1

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know						23%	22%
Stockpile food/water/materials						45%	44%
Help to evacuate					100%	42%	44%
Protected important documents						19%	19%
Stay together with children/family						13%	13%
Strengthen house						3%	3%

For fires, as mentioned earlier the responses are limited to only one township. But the types of actions respondents would take if a warning was given for an impending fire are similar to those for respondent to cyclones/storms and floods. Their priorities would be on helping with evacuation and stockpiling food and water.

Summary of key points on Preparedness and Response

- Actions that respondents' households have actually taken to date to prepare for an emergency situation have been quite limited, with 36% of respondents saying nothing. This figure was very high for the exit area of Labutta, at 67%.
- Generally those who have taken some measures have only done one or two things, the most frequently mentioned being stockpiling food and water (33% of respondents). The next two things were protecting important documents (27%) and identifying safe areas (26%). Other possible measures were mentioned by only a few respondents.
- In response to what they would do if they received a warning that about an impending hazard, responses were similar for all three main hazards (cyclones/storms, floods and fire). Most respondents said they would help with evacuation. The next two things mentioned most frequently were stockpiling food and protecting important documents.
- Cross checking those respondents who mentioned stockpiling as a preparedness measure and those who gave it as an immediate response to receiving a warning about an impending hazard shows that over 50% of respondents mentioned it both times. For protecting important documents, the overlap was over 40%. So for stockpiling food/water, the remaining 50% (and 60% for protecting documents) do not consider that they should prepare these things in advance, they wait until a warning is given.

IV.6 Institutional Arrangements

Respondents were asked which individuals and groups existed in their community that could assist with disaster management. Responses showed that most of the exit and consolidation villages have VDMCs and various task forces but less so in the newer villages. There are also more health volunteers in the exit and consolidation villages than the new ones, with the exception of villages in Pathein where the percentage of respondents who said their community had health volunteers was low (only 26%). School DRR committees are also present in more communities of the exit and consolidation villages than the new ones, with again a lower percentage reported from Pathein.

TABLE IV.6.1 – Individuals or groups who can assist with DM (# & % of respondents)

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
VDMC	58	53	48	31	5	7	202
EW task force	65	60	55	33	8	44	265
Searh & rescue TF	60	51	46	28	6	2	193
First aid TF	58	50	49	37	5	8	207
School DRR committee	36	14	32	18	5	6	111
Health volunteers	68	17	57	43	31	33	249
Other volunteers/youth mobilizers etc	43	12	24	27	13	14	133
Misc. other individuals			2	2	1		5
	388	**257**	**313**	**219**	**74**	**114**	**1365**

% of all Respondents

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
VDMC	76%	80%	71%	52%	4%	3%	33%
EW task force	86%	91%	81%	55%	6%	20%	43%
Searh & rescue TF	79%	77%	68%	47%	5%	1%	32%
First aid TF	76%	76%	72%	62%	4%	4%	34%
School DRR committee	47%	21%	47%	30%	4%	3%	18%
Health volunteers	89%	26%	84%	72%	25%	15%	41%
Other volunteers/youth mobilizers	57%	18%	35%	45%	10%	7%	22%
Misc. other individuals			3%	3%	1%		1%

Follow up to the question above, respondents were asked to give a few examples of the usefulness of these individuals and committees. The responses they gave are shown in Table IV.6.2 (IV.6.2a shows data in numbers and IV.6.2b in percentages).

TABLE IV.6.2a – Examples of the usefulness of individuals and groups that assist with DM (number of respondents)

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know	10	27	22	12	25	20	116
Give firstaid/ take medical care	19	8	17	25	13	49	131
Provide information/Making plans	25	24	12	4	6	22	93
Helping if need (leaders show good example)	25	7	10	6	9	22	79
Work at school/ make defense/ dig well	5		19	25	1	2	52
Village Management Committee	10		1	3	1	6	21
Support poor people/ help funeral	1		10	1	2	3	17
Training/ Sharing knowledge	4	2	4	2	2		14
Search & Rescue Task Force reduce risk	4	2		1		1	8
Take care of Children and Women	2				4	2	8
Reminding to protect against fire	5			1	1		7
Protect vulnerable people	2					2	4
Misc. other responses	1	1	4		3	1	10
	113	**71**	**99**	**80**	**67**	**130**	**560**

TABLE IV.6.2b – Examples of the usefulness of individuals and groups that assist with DM (percentage of respondents)

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know	13%	41%	32%	20%	20%	9%	19%
Give firstaid/ take medical care	25%	12%	25%	42%	10%	23%	21%
Provide information/Making plans	33%	36%	18%	7%	5%	10%	15%
Helping if need (leaders show good example)	33%	11%	15%	10%	7%	10%	13%
Work at school/ make defense/ dig well	7%		28%	42%	1%	1%	9%
Village Management Committee	13%		1%	5%	1%	3%	3%
Support poor people/ help funeral	1%		15%	2%	2%	1%	3%
Training/ Sharing knowledge	5%	3%	6%	3%	2%		2%
Search & Rescue Task Force reduce risk	5%	3%		2%		0%	1%
Take care of Children and Women	3%				3%	1%	1%
Reminding to protect against fire	7%			2%	1%		1%
Protect vulnerable people	3%					1%	1%
Misc. other responses	1%	2%	6%		2%	0%	2%

Although instructions to enumerators was to prompt respondents to say which of the groups mentioned in the first question above were the ones to provide the useful services they identified, this was not followed. So although a number of examples of usefulness are given, it is not always clear which of the groups or individuals was most useful to the respondents.

IV.7 Post Disaster (Psychosocial impact)

This final section posed a few questions to the respondents in relation to possible psychosocial impact of disasters on members of their communities.

Only 13% of respondents say they have noticed any psychosocial problems in the aftermath of previous disaster occurring. The highest percentage was in Sittwe (22%).

TABLE IV.7.1 – Psychosocial problems in community in aftermath of disaster

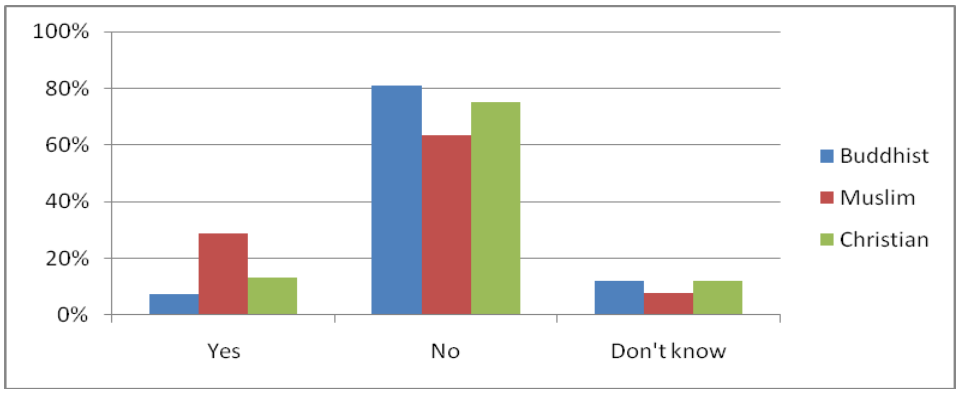
Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention	Exit	Consol	Consol	New	New	New	
Yes	14	1	10	5	2	47	79
No	53	61	48	43	113	147	465
Don't know	9	4	10	12	11	21	67
	76	**66**	**68**	**60**	**126**	**215**	**611**

% of responses

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention	Exit	Consol	Consol	New	New	New	
Yes	18%	2%	15%	8%	2%	22%	13%
No	70%	92%	71%	72%	90%	68%	76%
Don't know	12%	6%	15%	20%	9%	10%	11%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

There were no significant differences in the responses between male and female respondents but quite a difference when compared by religion. A higher percentage of Muslims have noticed psychosocial problems in their community – this correlates with the overall responses above in that the majority of Muslims are in Sittwe.

CHART IV.7.1 – Psychosocial problems in community in aftermath of disaster (by religion, % of respondents)



Regarding people in the community most affected by psychosocial problems, the majority identified women and children, with some people feeling that all people were affected to some extent.

TABLE IV.7.2 – Groups of people most affected by psychosocial problems

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Don't know			4	1			5
Women & children	7		4	1	1	32	45
All people to some extent	6			2	1	8	17
Children	1					12	13
Older people	1	1	1	1		1	5
People with heart/hypertension problems			2				2
	15	**1**	**11**	**5**	**2**	**53**	**87**

Respondents mentioned a number of ways in which these problems show themselves, relatively evenly divided between "becoming frequently sad, angry or afraid", "problems concentrating" or "behaving abnormally compared to before the disaster".

TABLE IV.7.3 – How psychosocial problems show

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Become frequently sad, angry or afraid	4		2	2	2	26	36
Have problems concentrating, forget things	5			1		28	34
Behaving abnormally compared to before	11	1	1		1	13	27
Reduced participation in community activities	3					4	7
Misc. other responses	2		3	1			6
Multiple responses	**25**	**1**	**6**	**4**	**3**	**71**	**110**

The majority of respondents had no idea how the community can help with these psychosocial problems but, of the few suggestions given, the most frequent was to "encourage them".

TABLE IV.7.4 – Ways community can help those with psychosocial problems

Township	Labutta	Pathein	Pyapon		NgaPuDaw	Sittwe	Total
Intervention level	Exit	Consol	Consol	New	New	New	
Take treatment	3	1		1			5
Borrow money	3					1	4
Encourage them	6		3		1	2	12
	12	**1**	**3**	**1**	**1**	**3**	**21**

Summary of Psychosocial Impact

- Not very many respondents say they have noticed any psychosocial impact.
- Those who have say it most affects women and children.
- It shows up through changes in their behavior, getting sad, angry or afraid or having problems concentrating.
- There were not many suggestions from respondents as to how the community could help, other than a few people saying to encourage these affected persons.

V Conclusions and recommendations

This section concludes the baseline survey analysis with the following topics:
- Summary of current knowledge, attitudes and practices of Volunteers
- Summary of current knowledge, attitudes and practices of General Population
- Recommendations for project monitoring of indicators
- Concluding remarks

IV.1 Summary of knowledge, attitudes and practice (VOL)

Knowledge

Area of knowledge	Current level
Meaning of Disaster Risk	70% said they knew the meaning but the explanations given were not all correct – only 32 (22%) gave partially correct meaning. Therefore this level should be considered starting at zero.
Elements of DR (H, V, C)	Although many volunteers mentioned one or two of the three elements, only 8 volunteers (5%) mentioned all three.
Meaning of CBDRR	50% say they understand CBDRR process and the meanings given suggest that they do
Know 4 phases of DM	Only 12 volunteers (8%) accurately named all 4 phases
Know at least 1 thing to do in each phase:	After reclassification and evaluation of responses, the percentages of volunteers whose knowledge was correct were as follows:
- Prevention/mitigation	31%
- Preparedness/warning	99%
- Response/relief	82%
- Rehabilitation/reconstruction	71%
Meaning of Climate Change	74% say they know the meaning – but meanings given related more to cause and consequences. Suggest to put this percentage as 25% of these – i.e. 19% of volunteers as having understanding
Hazard Awareness	100% of volunteers could accurately identify hazards
Preparedness	Only 23 volunteers (16%) could name more than three ways to prepare
Knowledge of vulnerable groups:	The following percentages of volunteers identified each of these groups:
- Older Persons	88%
- Children	73%
- Persons with disabilities	73%
- Women	52%
- Poor households	8%
Causes of vulnerability	The majority of volunteers focused only on the difficulty of the above groups during the need for evacuation. More in-depth understanding of the causes of vulnerability is needed so suggest to put this baseline percentage at 10%.
How to address vulnerability	This is linked to the causes – as volunteers focused on difficulty with evacuation, their suggestions for addressing impact were almost exclusively for family/neighbors to assist. Baseline percentage could be as for previous point – i.e. 10%

Area of knowledge	Current level
Meaning of Risk Assessment	74% said they did not know the meaning – and of those who gave meanings, mostly they were either incorrect or not comprehensive. Suggest baseline of zero
Role during a disaster	Excluding those who don't know and those who included early warning as a role, 25% of volunteers know what to do during a disaster
Knowledge of DM structure in Myanmar	22 volunteers (15%) said they knew the DM structure but when asked to name the levels, there was no relevant response given. Thus baseline percentage is zero
DM Law	31% of volunteers have heard of the DM Law

Attitudes

Elements of attitude	Current level
Inclusion in Disaster Management:	The following percentages of volunteers say these groups can be on committees/task forces or act as advisors:
- Older Persons	83%
- Children	68%
- Persons with disabilities	73%
- Women	76%
Added value on DRR committees:	The following percentages could identify one or more elements of added value for each group:
- Older Persons	91%
- Children	90%
- Persons with disabilities	66%
- Women	93%
Girls can be rescue workers in schools	86%
Students can contribute to DM/planning	89%

Practice

Area of practice	Current level
Note:	*For confidence questions below, responses related to "a bit confident" are not included in the baseline percentages.*
Confident to conduct Risk Assessment	58%
Confident to conduct DRR training	58%
Confidence to include vulnerable groups in DRR planning:	
- Older Persons	64%
- Children	81%
- Persons with disabilities	57%
- Women	65%
Community has DRR Action Plan	61% of respondents say their community has AP
(Some) Action plan has been implemented	79% of respondents say some things have been done
Know why some plans have not been implemented	60% know why not all plans have been implemented
Village DRR plans have been shared with village tract/township DM committee	68 volunteers (46%) say their community plans have been shared
All schools in the community have DRR committees	36 volunteers (24%) say their schools have DRR committees
Students know what to do during and after a disaster	25 volunteers (17%) say students in their schools know what to do
Schools have evacuation plan	38 volunteers (26%) say their schools have evacuation plan

IV.2 Summary of knowledge, attitudes and practice (GP)

Knowledge

Area of knowledge	Current level
Hazard awareness	94%
Why hazards occur	30% did not know and among the 70% that did know were 4% who say divine intervention so baseline would be more accurate at 66%
How to prepare for hazards	Only 14% did not know but among the others, most could only give one or two examples. Suggest therefore to put baseline at 50% of those who do know – i.e. 43%
Knowledge of vulnerable groups:	Using data from the main hazard, the following percentages of respondents identified each of these groups:
- Older Persons	67%
- Children	54%
- Persons with disabilities	45%
- Women	16%
- Poor households	10%
Causes of vulnerability	The majority of respondents focused only on the difficulty of the above groups during the need for evacuation. More in-depth understanding of the causes of vulnerability is needed so suggest to put this baseline percentage at 10%.
How to address vulnerability	This is linked to the causes – as respondents focused on difficulty with evacuation, their suggestions for addressing impact were almost exclusively for family/neighbors to assist. Baseline percentage could be as for previous point – i.e. 10%
What to do if hazard about to strike (i.e. warning given)	Only 8% did not know but of the other 92%, most could only name one thing so suggest that baseline figure be put at half of this percentage – i.e. 46%

Attitudes

Elements of attitude	Current level
Inclusion in Disaster Management:	Using data from main hazard, the following percentages of respondents say these groups can be on committees/task forces or act as advisors:
- Older Persons	60%
- Children	39%
- Persons with disabilities	48%

Practice

Area of practice	Current level
Community has EWS	51% of respondents say their community has EWS
Community has conducted simulations/drills	29% of respondents say their community has done
Community has DM plan	19% of respondents say their community has plan
There is adequate participation in the planning process	42% of participants said participation was adequate
Preparedness measures undertaken by households	64% had undertaken some measures but most had only done one or two so suggest that baseline percentage be half of this figures – i.e. 32%

IV.3 Recommendations for project monitoring of indicators

As some areas of Knowledge, Attitude and Practice above are already quite high, although not always in all townships, and it is difficult for any project to achieve 100% responses, the consultant recommends the project focus on some key issues. The table below suggests some possible areas for MCCR consortium to take into consideration and adds some recommendation for implementation and monitoring.

Notes to target percentages:

1. As the project framework gives a general target of increased capacity from 7% to 40% (i.e. increase of 33%), baseline percentages below are increased by the same amount – however, no indicator is set at over 80% as it is never possible to ensure a figure above that can be attained during social or human development work (exception is actions e.g. EWS, drills, DM plans)

2. Where baseline percentages differ between different intervention levels, separate targets are proposed for each level (exit, consolidation and new/expansion villages)

SN	Suggested indicator	Current level	Proposed target	Recommendations/ Notes
A	**Volunteers**			
1	Volunteers can clearly explain the meaning of Disaster Risk	All close to 0%	ALL – 33%	Refresher training for exit and consolidation areas. For all areas, keep meaning short and simple; and repeat often (e.g. display at all trainings, even DRR is not the main subject) Prepare good quality booklet with clear meanings of all terms to volunteers
2	Volunteers are clear about the three elements of Disaster Risk (Hazard, Vulnerability, Capacity)	ALL – 5%	ALL – 38%	
3	Volunteers can explain the meaning of Risk Assessment process	All close to 0%	ALL – 33%	
4	Volunteers can clearly explain the meaning of CBDRR	Exit – 51% Con – 63% New – 38% ALL – 50%	Exit – 80% Con – 80% New – 71% ALL – 83%	
5	Volunteers know the 4 phases of DM	Exit – 22% Con – 13% New – 0% ALL – 8%	Exit – 55% Con – 46% New – 33% ALL – 41%	
6	Volunteers can explain the meaning of Climate Change	ALL - 19%	ALL - 52%	
7	Volunteers can name more than three ways they can prepare for each main hazard	Exit – 15% Con – 25% New – 7% ALL – 16%	Exit – 48% Con – 58% New – 40% ALL – 49%	
8	Volunteers can explain at least three reasons why vulnerable groups (older persons, children, women and person with disabilities) are more affected by disasters	ALL – 10%	ALL - 43%	
9	Volunteers know the DM structure in Myanmar and can name each of the levels	All close to 0%	ALL – 33%	If MCCR intends to exit from Labutta at the end of this Action Plan, strong focus on these two issues will improve sustainability (by linking community structures to the national level)
10	Volunteers are aware of the DM Law	Exit – 41% Con – 31% New – 22% ALL – 31%	Exit – 74% Con – 64% New – 55% ALL – 64%	

SN	Suggested indicator	Current level	Proposed target	Recommendations/ Notes
11	Village DRR plans have been shared with village tract/township DM committees	Exit – 59% Con – 55% New – 29% ALL – 46%	Exit – 80% Con – 80% New – 62% ALL – 79%	These percentages are the % of volunteers who give this information, not the percentage of plans, schools or students
12	Schools in the communities have DRR committees	Exit – 27% Con – 22% New – 25% ALL – 24%	Exit – 60% Con – 55% New – 58% ALL – 57%	
13	Students know what to do during and after a disaster	Exit – 32% Con – 10% New – 13% ALL – 17%	Exit – 65% Con – 43% New – 46% ALL – 50%	
14	Schools have evacuation plan	Exit – 41% Con – 24% New – 16% ALL – 26%	Exit – 74% Con – 57% New – 49% ALL – 59%	
B	**General Population**			
15	Target groups can name at least three things that can be done to prepare for their main hazards	Exit – 47% Con – 42% New – 42% ALL – 43%	Exit – 80% Con – 75% New – 75% ALL – 76%	
16	Target groups are aware of how hazards can affect women differently to men	Exit – 41% Con – 11% New – 12% ALL – 16%	Exit – 74% Con – 44% New – 45% ALL – 49%	
17	Target groups are aware of how hazards can affect `poor people differently to those better-off	Exit – 11% Con – 9% New – 11% ALL – 10%	Exit – 44% Con – 42% New – 44% ALL – 43%	
18	Target groups can explain at least three reasons why vulnerable groups (older persons, children, women and person with disabilities) are more affected by disasters	ALL - 10%	ALL - 43%	
19	Target communities have EWS	Exit – 91% Con – 81% New – 34% ALL – 51%	Exit – 90% Con – 90% New – 67% ALL – 84%	These percentages are the % of target persons who give this information, not the percentage of communities
20	Target communities have conducted simulations/drills	Exit – 82% Con – 79% New – 3% ALL – 29%	Exit – 90% Con – 90% New – 36% ALL – 62%	
21	Target communities have DM plan	Exit – 50% Con – 47% New – 4% ALL – 19%	Exit – 88% Con – 80% New – 37% ALL – 52%	
22	Target communities feel there is adequate participation in the community planning process	Exit – 50% Con – 53% New – 11% ALL – 42%	Exit – 80% Con – 80% New – 44% ALL – 75%	
23	Households in the target communities have undertaken at least three measures to prepare themselves for an emergency event	Exit – 16% Con – 33% New – 34% ALL – 32%	ALL – 65%	As Exit % is exceptionally low and others almost same, suggest same target for all (= to ALL +33 percentage points)

The above recommended targets for each intervention level are the suggestions of the external consultant. The MCCR project team is not necessarily obliged to accept these as they stand. The team should meet to review the proposed targets and refine if necessary based on specific information they have about each area. For example, in the "new" areas, not all townships may be a position to accept similar targets. As long as the MCCR team has good reasons for adjusting the suggestions of the consultant, the targets agreed by the project team should take precedence over the above.

Some recommendations for the endline survey

In order to enable clear comparison between the indicators measured through this baseline survey and the status at the end of the project, it is important not to make any significant changes to the questions as they have been formulated. However, the consultant would suggest making the following two changes:

- Reduce the hazard analysis section by analyzing only the first main hazard as the responses related to causes, information and ways to prepare do not differ significantly between the main hazards in the project area.
- For question 14A of the General Population questionnaire, do not skip to next question if the answer is no (to whether they personally participated in the planning process) as even if they did not participate, they may be able to offer information about the plan and about the level of participation in the planning process.

Regarding data processing, the consultant suggests that (after de-coding open questions) all codes be set up in the SPSS data base to avoid have to cross check with separate code-books as for this survey. That is time consuming and open to possible human error.

IV.4 Concluding remarks

This baseline survey has collected a lot of data which establishes current knowledge, attitudes and practices among the target population and the volunteers. It is hoped that this information can be used by the MCCR consortium to build on the areas of weaknesses identified to ensure that the target population increase their resilience to reduce impacts from any future hazard that may occur.

The consultant thanks all those who gave up their time to participate in this survey and wishes the project team, volunteers and target communities success in achieving their goal of community resilience.